

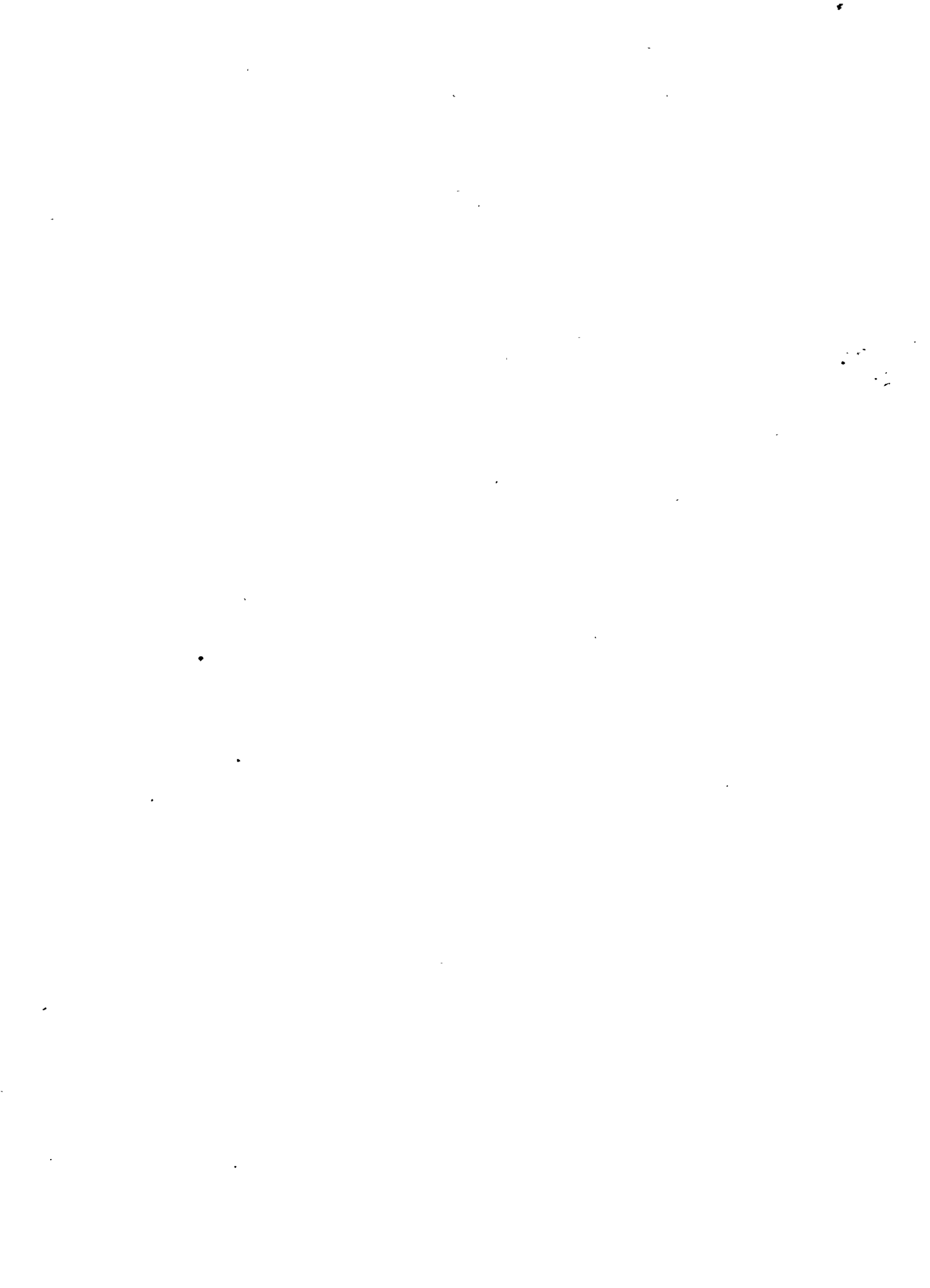
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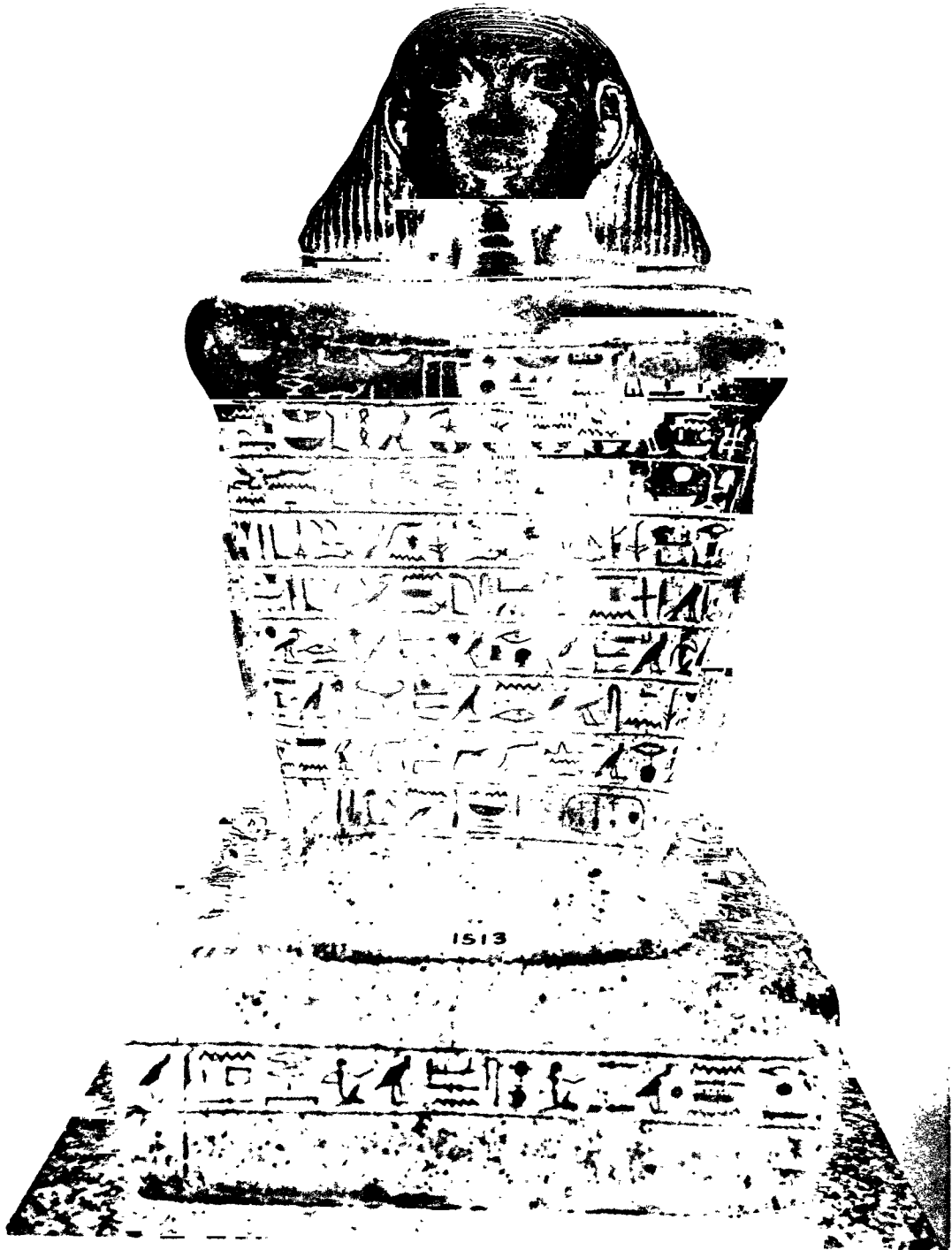
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CONTENTS

	PAGE
THE STATUES OF SENNEMUT AND MENKHEPERRĒ- SENH IN THE BRITISH MUSEUM H. R. Hall	1
AKHENATEN'S ELDEST SON-IN-LAW ʿANKHKHE- PRURĒʿ Percy E. Newberry	3
THE GRAFFITO FROM THE TOMB OF PERE ... Alan H. Gardiner	10
A HEART SCARAB OF THE MNEVIS BULL ... W. Spiegelberg	12
GREEK SIGHTSEERS IN EGYPT M. Rostovtzeff	13
OBSERVATIONS ON THE CHRONOLOGY OF THE ROMAN EMPERORS IN THE SECOND HALF OF THE THIRD CENTURY Arthur Stein	16
NOTE ON THE FOREGOING H. Mattingly	19
CHRONOLOGICAL PITFALLS J. G. Milne	20
ON EGYPTIAN FISH-NAMES USED BY GREEK WRITERS D'Arcy Wentworth Thompson	22
AN AGRICULTURAL LEDGER IN P. BAD. 95 ... M. Schnebel	34
AN IVORY SPHINX FROM ABYDOS John Garstang	46
WHO SUCCEEDED RAMESSES IX-NEFERKERĒʿ? ... Giuseppe Botti	48
THE CHRONOLOGICAL PROBLEMS OF THE TWEN- TIETH DYNASTY T. Eric Peet	52
OBJECTS OF TUTʿANKHAMŪN IN THE BRITISH MUSEUM H. R. Hall	74
THE NEW PTOLEMAIC PAPYRUS CONTAINING PARTS OF <i>Iliad</i> , XII, 128-263 G. M. Bolling	78
THE SONS OF TUTHMOSIS IV Percy E. Newberry	82
AN EGYPTIAN SPLIT INFINITIVE AND THE ORIGIN OF THE COPTIC CONJUNCTIVE TENSE ... Alan H. Gardiner	86
NOTES ON THE EARLY HISTORY OF TIN AND BRONZE A. Lucas	97
MISCELLANEA Percy E. Newberry	109
SOME POTSDHERDS FROM KASSALA J. W. Crowfoot	112
NOTE ON THE SCULPTURED SLAB NO. 15,000 IN THE BERLIN MUSEUM Percy E. Newberry	117

	PAGE
FIVE LEASES IN THE PRINCETON COLLECTION ...	H. B. Van Hoesen and A. C. Johnson ... 118
NOTE ON AN ANCIENT EGYPTIAN FIGURE ...	Warren R. Dawson ... 126
DAVID GEORGE HOGARTH	H. R. Hall ... 128
BIBLIOGRAPHY: GRAECO-ROMAN EGYPT. A. PAPYRI (1926-27)	H. J. M. Milne, A. D. Nock, H. I. Bell, J. G. Milne, N. H. Baynes, F. de Zulueta, M. E. Dicker, R. McKenzie ... 131
BIBLIOGRAPHY (1926): ANCIENT EGYPT ...	Jean Capart ... 159
A PAINTED TERRACOTTA HEAD IN THE BRITISH MUSEUM	H. R. Hall ... 209
THE PIG AND THE CULT-ANIMAL OF SET ...	P. E. Newberry ... 211
EGYPTIAN NATIONALISM UNDER GREEK AND ROMAN RULE	J. Grafton Milne ... 226
THE CEMETERIES OF ABYDOS: WORK OF THE SEASON 1925-26. I. STELAE	H. Frankfort ... 235
PTOLEMY II	W. W. Tarn ... 246
SOME PREHISTORIC VASES IN THE BRITISH MUSEUM AND REMARKS ON EGYPTIAN PRE- HISTORY	Alexander Scharff ... 261
SUEZ AND CLYSMA	J. J. Hess ... 277
A RAMESSIDE ROYAL STATUE FROM PALESTINE	H. R. Hall ... 280
A ROYAL STELE OF THE NEW EMPIRE FROM GALILEE	W. F. Albright and Alan Rowe ... 281
THREE PTOLEMAIC PAPYRI	C. C. Edgar ... 288
THE LETTERS OF AAHMÖSE OF PENIATI ..	S. R. K. Glanville ... 294
SILVER IN ANCIENT TIMES	A. Lucas ... 313
A LATIN PETITION OF ABINNAEUS (PAPYRUS B.M. 447)	Seymour De Ricci ... 320
A. G. K. HAYTER, M.A., F.S.A. ... ..	... 323
NOTES AND NEWS ... ..	... 180, 325
NOTICES OF RECENT PUBLICATIONS ... ..	... 185, 329
LIST OF PLATES ... ..	... 334
LIST OF ILLUSTRATIONS IN THE TEXT ... ..	... 337
NOTICES OF RECENT PUBLICATIONS, DETAILED LIST	... 339
INDEX ... ..	... 340



Statuette in red quartzite of Sennemut. British Museum, No. 1513.

Height 21 inches (53.5 cm.)

THE STATUES OF SENNEMUT AND MENKHEPERRĒSEN̄B IN THE BRITISH MUSEUM

By H. R. HALL




With Plates i-iii.

Fourteen years ago, in 1914, I published in Part v of *Hieroglyphic Texts, etc., in the British Museum*, Pl. 32, photographs of the three, then newly-acquired, stone figures of Sennemut or Senmut (Nos. 174, 1513) and MenkheperrĒsen̄b (No. 708) in the Museum, and in Plates 29-31 the texts of the figures of Sennemut and in Plate 33 those of that of MenkheperrĒsen̄b. The three statues were exhibited in the Sculpture Gallery of the British Museum before the war and have been exhibited there ever since. But they do not seem to have attracted the attention that is their due, for I find that in the *American Journal of Semitic Languages*, XLIV, No. 1, October 1927, Mr. T. George Allen publishes a figure of Sennemut, in the Field Museum at Chicago, obtained by Dr. J. H. Breasted in 1925, which he says is the ninth statue of Senmut known to him (p. 49), whereas it is the eleventh known to us here. I am indebted to Mr. Allen's courtesy for bringing the Chicago figure to my knowledge, and I hasten to make him and possibly others better acquainted with our British Museum figures of Sennemut than is apparently the case. I therefore republish in Plates i-iii photographs of the three statues already published in *Hieroglyphic Texts*, v, to which volume I refer readers for their inscriptions. The Chicago statue is unique in that it is the only standing figure known of Sennemut, as is also ours in that it is the only known figure of him sitting on a seat. In this sitting figure of ours (No. 174, Pl. ii), Sennemut also holds the princess NeferurĒ in his arms. In No. 174 NeferurĒ (who here too wears the side-lock and also a beard, like Khonsu) is held tightly by her male nurse and enveloped in the folds of his long funerary robe, as in the squatting figures Berlin 2296 and Cairo 42,114, 42,115; whereas in the Chicago figure the whole of her is visible, seated in Sennemut's lap almost as Harpokrates sits in the lap of Isis and as we see her also in the Cairo statue 42,116, which represents Sennemut seated on the ground.

MenkheperrĒsen̄b's statue (No. 708, Pl. iii) closely resembles No. 174, except that of course there is no NeferurĒ in his case. Both statues are funerary, as is shown by the long Osirian garment worn and the formal, unfashionable wig (a conventional coiffure of the dead) in both cases, as well as by the hieratic seats on which both sit. And in his right hand MenkheperrĒsen̄b holds the curious sacral knot or sash (see also p. 76) which bears so close an analogy to the similar object of unknown though certainly religious import so often met with in the contemporary frescoes, etc., of Minoan Crete¹. The two things are not identical, but they are much alike, and may have a common origin. Both figures have an inscribed plinth at the back, rising from the seat.

¹ See especially EVANS, *Palace of Minos*, I, 430 ff., and NILSSON, *Minoan-Mycenaean Religion*, 137 ff. In Egypt the object was certainly sacral; MenkheperrĒsen̄b's statue is purely funerary and religious in its intention, as is shown by the Osirian garment and formal wig worn (see above).

In style and workmanship, although it generally resembles that of Sennemut, except that it is beardless and that the wig is not ribbed, Menkheperre'senb's statue is finer and better. The face is better sculptured than those of either Sennemut or the little princess; the eyes of both are rather clumsily and staringly expressed, whereas Menkheperre'senb's are admirably rendered. Also his face is perfect, without a scratch, whereas Sennemut's and Neferure's are both slightly marred, as is also that of the other figure of Sennemut (No. 1513, Pl. i). No. 708 is indeed in beautiful condition, having only one slight chip on its surface. It gives the impression of being the work of a finer school than that of the Sennemut figures of half-a-century earlier (*c.* 1500 B.C., Menkheperre'senb being *c.* 1440). The Chicago statue as well as our Nos. 174 and 1513 seem to have a touch of crudeness in comparison with it. Mr. Allen describes it as "summary" (p. 54). The portraits are not strongly characterized, except possibly originally in the case of No. 1513, which is marred; the others seem purely conventional of the ushabti-type.

The damage to the face of 1513 looks as if it had been inflicted purposely with a hammer. It is not an ordinary casualty. It resembles the (more severe) damage inflicted on the face of the statue of Hatshepsut discovered by Mr. Winlock at Dêr el-baḥrî (*Bull. Met. Mus. N.Y.*, 1928, II, fig. 52, p. 46), which he considers to have been effected by kindling a fire on the face of the statue, in order to disintegrate the granite. The damage to our statue no doubt dates from the time of the supposed disgrace of Sennemut or his *damnatio memoriae* after the death of Hatshepsut (or possibly before, according to Mr. Allen). On the other hand his name survives intact on both our figures, whereas on the Chicago statue it has been hammered out, though not so heavily as to render it illegible. On No. 174 it is spelt \downarrow , on No. 1513 \downarrow , on the Chicago figure \downarrow , without determinative (ALLEN, *op. cit.*, 53).

On both our figures, as on his, the name of Amūn is untouched. That means that in the case of our two figures also, as in those of the Chicago figure, Berlin 2296, Cairo 42,116, and Cairo 42,117 (in this last the god's name has only suffered by accident), Sennemut's statues were evidently cast out of the temple in which they stood (four of those known were found at Karnak, so that probably all, except the Berlin statue, were originally set up there)¹, after his disgrace, since, as Mr. Allen points out, had they been in evidence at the time of Akhenaten's heresy the name of Amūn on them would certainly have been mutilated. But that "incensed royalty" did not entirely succeed in making Sennemut nameless is shown by his name being untouched on our two statues. In the case of Menkheperre'senb (No. 708), however, the name of Amūn has been erased and afterwards restored. Menkheperre'senb was never disgraced and his statues thrown out of the temple, so that Akhenaten got at him.

No. 1513 (the squatting figure of Sennemut) is of red quartzite sandstone, and measures 21 ins. (53·5 cm.) in height; No. 174 is of dark grey ("black") granite, and measures 28 ins. (71 cm.) high; No. 708 is of the same stone, and is 2 ft. 8 ins. (81·2 cm.) high.

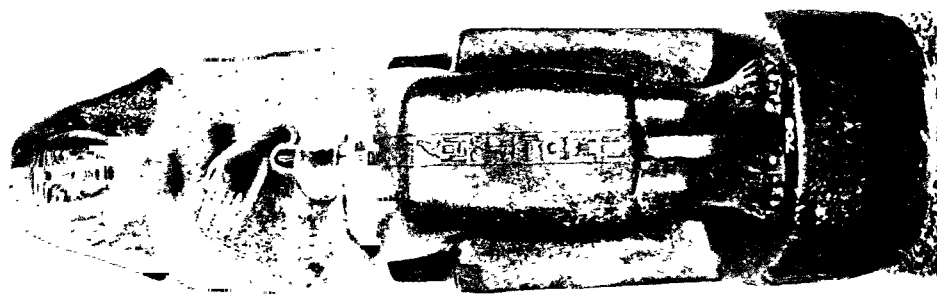
¹ This is said to have been found by d'Athanasi at Shêkh 'Abd el-Ḳurnah, and so belonged to Sennemut's tomb there (WINLOCK, *Bull. Met. Mus. N.Y.*, 1928, II, 56). Mr. Winlock, while noting that two of the Cairo statues at least are from Karnak, suggests, *loc. cit.*, that the British Museum figures are both from the tomb. That I doubt: it is much more likely that they were found at Karnak. We have not, by the way, *two* statues like Berlin 2296, as Mr. Winlock seems to think. There is only one holding Neferure, No. 174, and this is not squatting.



Statuette in dark grey granite of Sememut and the young princess Neferuḥ.

British Museum, No. 174.

Height 28 inches (71 cm.)




Statuette in dark granite of Menkheperresneb British Museum, No 708

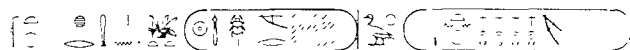
Height 32 inches (81.2 cm)

AKHENATEN'S ELDEST SON-IN-LAW 'ANKHKHEPRURĒ'



BY PERCY E. NEWBERRY

With Plate iv, fig. 1 and Plates v, vi.


At the foot of the hill of the Shêkh 'Abd el-Kurnah at Thebes, and some little distance to the left of the tomb of Ramose, the vizier of Amenophis IV, is the small mortuary chapel of the *urb*-priest of Amûn, Pere¹. This tomb is numbered 139 in GARDINER-WEIGALL, *Topographical Catalogue*, where it is doubtfully attributed to the reign of Tuthmosis IV. It is certainly not earlier than that king, nor is it later than the reign of his successor Amenophis III. But whatever the precise date of the tomb may be, its chief interest lies in a hieratic graffito written upon the left-hand jamb of the entrance to an inner chamber. Two years ago I traced this graffito and Mr. Harry Burton kindly photographed it on a large scale for me so that the inscription could be studied at leisure. My facsimile is reproduced in Pls. v and vi together with a transcription made by Dr. Gardiner in 1912. Dr. Gardiner appends a translation and some notes at the end of this paper (p. 10). It was Bouriant who first drew attention to this graffito. In a note printed in the *Rec. de trav.*, XIV, 70, he says that it is composed of two parts, "la seconde formée de vingt-cinq lignes renfermant une prière à Ammon composée par le prêtre et scribe ², texte très mutilé, l'écriture étant fréquemment effacée. La première partie, qui ne comprend que deux lignes, nous donne la date d'un roi jusqu'à présent inconnu. Elle est ainsi conçue:




Le roi Nefer-nefru-Aten n'est connu que par cette inscription. Il est probable qu'on doit le placer parmi les pharaons, appelés communément hérétiques, qui ont régné entre Aménophis III et Horemheb. C'est sans doute un de ces Cherrès ou Acherrès que nous donnent les listes grecques et qu'on n'a pu encore identifier. Peut-être faut-il voir dans


¹ In the British Museum (No. 1182, HALL, *Hieroglyphic Texts from Egyptian Stelae, etc. in the British Museum*, Part VII, Pl. 7) there is a lintel from the tomb of a Pere which was found by Robert Mond in 1905 near Tomb No. 139 at Thebes. The inscriptions on the lintel describe Pere as  and . In BUDGE, *Guide to the Egyptian Galleries (Sculpture)*, 1909, 119, this Pere is said to be an "Overseer of the Granaries of Amen-Ra at Thebes," but no such title occurs upon the lintel! It is doubtful whether this Pere is the same as the one of Tomb No. 139.

² The priest and scribe is Pawah *son* of Atefsenb, not Atefsenb as Bouriant asserts.

ce prince le fils de Thoutmès IV que Lepsius signale dans son *Königsbuch* (No. 370) et qui porte, lui aussi, le nom de .

In 1894 Scheil¹ published copies of most of the hieroglyphic inscriptions in Pere's tomb, but referred only briefly to the graffito, and made no effort to copy it. He simply says that it was written "par le prêtre et scribe Atef-senb" (thus repeating the error of Bouriant), and that it was dated in the third year "d'un roi Nefer-nefru-Aten






.




In a foot-note to the reading of the first cartouche, he remarks, "M. Bouriant lit ; je crois ma lecture certaine." Maspero² accepted

Scheil's reading and stated that it seemed to him to represent a transitional form of the protocol of Amenophis IV, and not the name of a new king. Petrie³ also agrees with Scheil and says "probably this is an early variant of Akhenaten's name which he afterwards transferred to his queen on marriage."

In GAUTHIER, *Livre des rois*, II, 344, is the following entry:



No query-mark is given to any of the signs, but in a footnote we read, "Bouriant avait lu le cartouche-prénom , et rapprochait ce roi du fils de Thoutmôsis IV . La correction de  en  par P. Scheil est sûrement exacte, car, en hiératique, le signe  n'est jamais écrit verticalement⁴." Gauthier continues "plusieurs hypothèses sont suggérées par le second cartouche; nous avons là, ou bien un roi nouveau, *Atonou-nofir-nofru-mer-Atonou*, différent d'Amenhotep IV (Bouriant), ou bien une masculinisation de la reine, femme d'Amenhotep IV, analogue à celle qui nous est connue pour Hatshepsout, ou bien enfin une forme intermédiaire du protocole d'Amenhotep, entre l'ancien et le nouveau protocole (Maspero). C'est cette dernière opinion qui me paraît être la bonne. Plus tard le roi transféra ce nom, abandonné par lui, à la reine Tadoukhipa, son épouse (PETRIE, *History*, II, 227)."


Davies in this *Journal* (IX, 132) alludes to the graffito, and points out that Gauthier's addition "*meryaten*" seems "totally unfounded," and the "grounds for the rejection of the reading  quite untenable." He further notes that "Scheil's reading is out of the question, the wish having been father to the thought." Gardiner supported Davies in reading  with Bouriant, and Davies further notes "perhaps  might be read if one was pushed to it, but the other reading is certainly the *prima facie* reading."


The clue to the correct reading of the first cartouche was given last year by Howard Carter. We were discussing certain problems relating to the family of Akhenaten when he drew my attention to the inscriptions upon a box that he had found in the tomb of Tutankhamūn. These inscriptions he has kindly allowed me to publish here from copies made by Gardiner in 1923. On the top of the box is a vertical line of hieroglyphs reading as shown on p. 5:

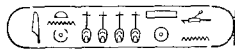
¹ SCHEIL, *Mémoires de la Mission archéologique française au Caire*, tome V, partie II, 588.

² MASPERO, *Struggle of the Nations*, ed. 1896, 317, n. 2.

³ PETRIE, *History*, II, 227.

⁴ This, of course, is inaccurate, for the -sign is very often written vertically in hieratic, especially in cartouches, e.g., in the prenomen of Tuthmosis I (PETRIE, *Medun*, Pl. xxxiii, line 7) and in the prenomen of Amenophis II (*Proc. Soc. Bibl. Arch.*, xxx, 272, with plate).

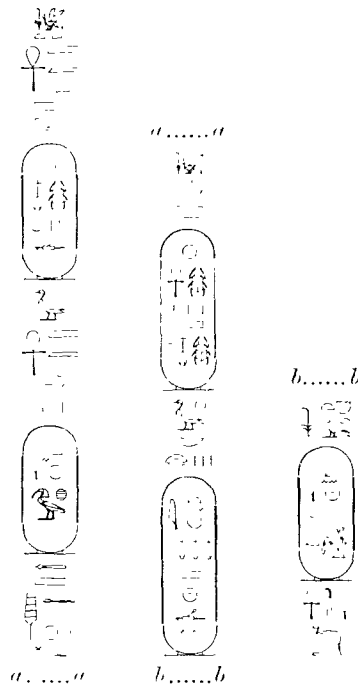
Here we have (1) the full titulary of Akhenaten followed by (2) that of 'AnkhkheprurĒc with the nomen Nefernefruatn Mery-UanrĒc, and (3) the name and titles of the Great King's-Wife, Merytaten. On a knob on the top of the box there is the premenen of () "AnkhkheprurĒc, beloved of NeferkheprurĒc." On another knob on the adjoining side of the box is his nomen

() "Nefernefruatn, beloved of UanrĒc."

Immediately I saw this inscription I recognized that Nefernefruatn "beloved of UanrĒc" must be the king of the graffito of Tomb No. 139 at Thebes: he was, therefore, not a new Pharaoh, but the well-known husband of Akhenaten's eldest daughter Merytaten, and the brother-in-law of Tutankhamūn. This young king with his consort is figured in the tomb of MeryrĒc II at El-'Amarnah¹, and bezels of finger-rings bearing one or other of his cartouches were found by Petrie² in 1892 on the site of the city Akhetaten. The premenen is the name 'AnkhkheprurĒc, sometimes without epithet and sometimes with an epithet "beloved of UanrĒc," or "beloved of NeferkheprurĒc." The nomen or Son-of-

RĒc-name has, as it now appears, two forms. At El-'Amarnah the form is SemenkhkarĒc-Zeserkhepru. At Thebes, on the box from Tutankhamūn's tomb and in the graffito from the tomb of Pere, the form found at El-'Amarnah is replaced by Nefernefruatn "beloved of UanrĒc." The epithets connecting the young king with Akhenaten, and the association with that king's daughter Merytaten, leave not the slightest doubt that the two forms of the nomen belong to one and the same Pharaoh, namely the obscure successor of Akhenaten and predecessor of Tutankhamūn, the son-in-law of the former, and brother-in-law of the latter.

There has been some dispute about the correct reading of the nomen in what is apparently its earlier form. Unfortunately the cartouches in the tomb of MeryrĒc II at El-'Amarnah were destroyed by native robbers in the eighties of last century. Davies³, who has published the scenes and inscriptions of this tomb, writes, "For the King's (cartouches) we must have recourse to the four copies, which unfortunately give as many readings for the personal name. There is little doubt, however, that the reading of Lepsius, Se-aa-ka-ra-zeser-kheperu, must be adopted, as the others are only imperfect readings of this. A squeeze exists among the papers of L'Hôte (*Papiers*, xviii, 1), and though the third sign is broken, aa (ϣ) is much the most satisfactory reading. It appears that the state of the cartouche was due to time and rough cutting, not to mutilation, and that it was fairly legible to a practised eye. The two rings of this king (PETRIE, *Tell el Amarna*, Pl. xv, 103-4) cannot shake this evidence, since each suggests a different hieroglyph." In spite of these remarks of Davies I cannot admit the reading ϣ in the cartouche in the tomb of MeryrĒc II, nor do I agree that the copies of the cartouches of



¹ DAVIES, *El Amarna*, II, Pl. xii.

² PETRIE, *Tell el Amarna*, Pl. xv.

³ DAVIES, *op. cit.*, II, 44, n. 1.

the finger-rings suggest different readings. I give in Fig. 1, *a-d*, the four existing copies of the cartouches in Meryrē's tomb. The sign \dagger , it will be seen, exists only in the copy of Lepsius¹ (made in June, 1845), and as his fifth sign is obviously wrong (he gives 𓂏 in place of 𓂏), his copy cannot be depended upon for accuracy. Hay's copy² (*a*), made about 1830, is quite indefinite. Nestor L'Hôte³ (1839) blunders badly (*b*), giving 𓂏 . Prisse d'Avennes⁴ (1843) gives the hieroglyph \dagger , which shows that the sign appeared to

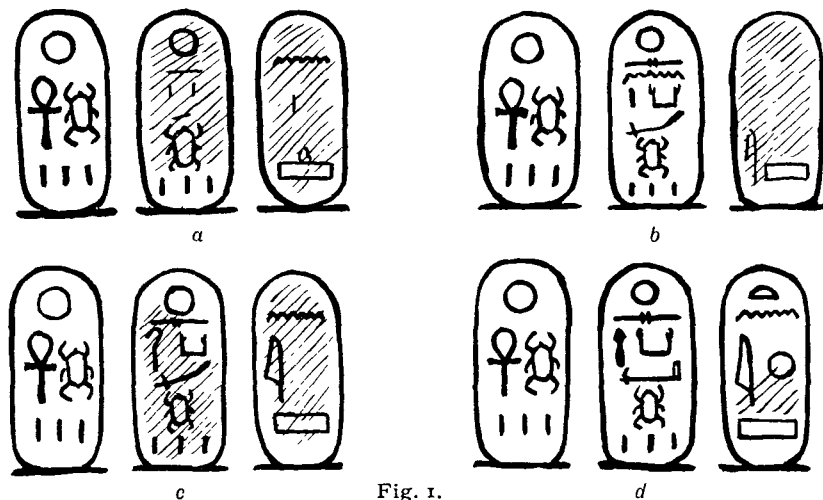


Fig. 1.

him to be broader above than below (*c*). Lepsius's \dagger might easily be a careless copy of a \ddagger -sign (*mnh*) with a long blade (*d*). But the finger-ring bezels are quite conclusive (see Fig. 2). Davies had only the two examples published by Petrie before him, but I have notes of seven, and they all clearly give \ddagger *mnh*, not \dagger *cz*. There can be no question that this Son-of-Rē's name should be read Semenkhkarē, not Saakarē.

The graffito in Tomb No. 139 at Thebes is important in other ways. It records the

Fig. 2. Scale \dagger .

highest, indeed, the only, date of the king's reign—the year three—and it proves that the cult of Amūn was flourishing at Thebes when the graffito was written. Further it shows that Ankhkheprurē was then a devotee of Amūn, for the *w*^c*b*-priest Pawah, for whom the hymn was written, bore the interesting titles (1) "Scribe of the Divine Offerings of Amūn in the temple of Ankhkheprurē at Thebes," and (2) "Scribe of the temple of Amūn in the (mortuary?) temple of Ankhkheprurē." Pawah's brother, the scribe who actually wrote the hymn, was also attached to the same temple. Of this building no other record has yet been brought to light.

¹ L., *D.*, III, 99.

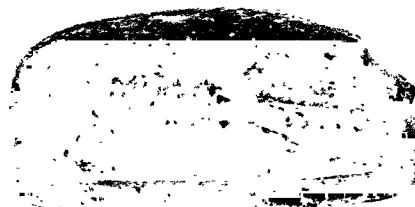
² British Museum *Add. MS.* 29,847, foll. 63, 64.

³ See his *Papiers*, tome XI, f. 14, in the Bibliothèque Nationale, Paris.

⁴ PRISSE D'AVENNES, *Monuments égyptiens*, 3.



I



2

1. Stele of Akhenaten and Semenkherē. Berlin, No. 17,813. *Scale nearly 1/2.*
2. Heart scarab of a Mnevis bull. Toledo Museum of Art. *Scale 1/3.*

that the place was then handed over to her eldest daughter." The exact date of the disappearance of Nefertiti from the scene of history is not known, but it must be placed some time after the twelfth regnal year of Akhenaten, for a scene in a private tomb at El-'Amarnah (DAVIES, *El Amarna*, II, Pl. 37; cf. III, Pl. 13) shows that she was then associated with the king in a state ceremonial.

There is probably yet another monument which shows Semenkharē by the side of his father-in-law Akhenaten. In 1854 Hekekyan Bey, while digging in the neighbourhood



Fig. 3.

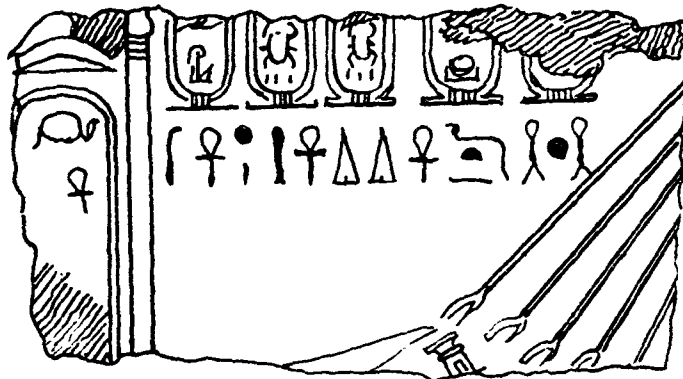


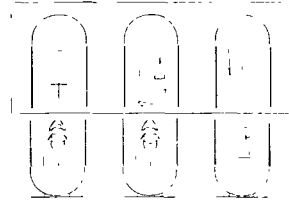
Fig. 4.

of the great prostrate figure of Ramesses II at Memphis, discovered some fragments of sculptures that dated from the time of the El-'Amarnah kings¹. One piece, which is now in the Museum of the University of Sydney, Australia, has an inscription upon it which records a temple of the Aten at Memphis². A second fragment of sculpture (see Fig. 3) shows the young king holding in his hand an ostrich feather fan and wearing the double

¹ Sir CHARLES NICHOLSON, *Aegyptiaca*, London, 1891, 117 seq. I had supposed that all the blocks figured by Nicholson were in the Museum of the University of Sydney, N.S.W., but Professor Woodhouse of that University informs me that only the fragment mentioning the temple of Akhenaten at Memphis (NICHOLSON, *op. cit.*, 134, Pl. 2) is preserved there. I have to thank the Honble. H. D. McIntosh for sending me a photograph of the monument.

² NICHOLSON, *op. cit.*, 2.

crown, his brow being surmounted by the uraeus: in front of him we see the forearm and part of the flowing garments of a much larger figure that obviously represented another king. Borchardt¹ has rightly interpreted this scene as showing Akhenaten and his co-regent Semenkhkarē. A third slab of sculptured stone (see Fig. 1), found also by Hekekyan Bey at Memphis, gives the lower parts of three cartouches which can only be restored thus²:



In these sculptured blocks we have, therefore, evidence that Semenkhkarē erected a building to the Aten at Memphis for it is inconceivable that these blocks of stone should have been brought down to Memphis from El-Amarnah. They formed part of a pavement "below another pavement" that itself was seven feet under the surface of the soil.

¹ *Zeitschr. f. äg. Spr.*, LV, 20.

² Nicholson rightly *op. cit.*, 122 recognized that the cartouches of this slab gave the name of Ankhkeprurē, though he supposed that the third cartouche was that of Queen Ty.

THE GRAFFITO FROM THE TOMB OF PERE

BY ALAN H. GARDINER

With Plates v, vi.

Professor Newberry's interesting article, with the conclusions of which I am entirely in accord, gives me an excuse for publishing my transcription, made in 1912 and re-collated in 1923, of the graffito in the tomb of Pere. Plates v and vi exhibit this alongside Professor Newberry's copy of the hieratic. That there are slight discrepancies between the two—discrepancies which it seemed desirable to preserve as the testimony of two independent pairs of eyes—is due to the condition of the original, brilliantly legible in some places but faint to the point of invisibility at others. The extreme "spottiness" of the text is far less the result of time than of the failure of the scribe to fill his reed with ink often enough. If I grasp the allusions of this fervent hymn to Amūn aright, it was written on behalf of a blind man Pawaḥ by his brother Thay or Bathay, and thus is an early example of that class of humble petitions for help which Mr. Gunn described so sympathetically in an earlier volume of this *Journal* (III, 81-94).

I must confess I was a convinced advocate of the reading $\text{ʿ} \text{A} \text{a} \text{k} \text{h} \text{e} \text{p} \text{r} \text{u} \text{r} \text{ē} \text{c}$ (with ʿ instead of ʿ) for the king's prenomen until Professor Newberry showed me the error of my ways. The evidence he has collected leaves no room for doubt, and so far as I can see, both from his transcript of the hieratic and from photographs he has lent me, the disputed sign in the four occurrences of the prenomen is practically identical with the certain ʿ in $\text{ʿ} \text{A} \text{a} \text{h} \text{e} \text{p} \text{r} \text{u} \text{r} \text{ē} \text{c}$ of l. 13. This particular problem of the Akhenaten age may therefore be regarded as finally solved.

The hymn contains some queer spellings and some obscure phrases, but is fairly intelligible wherever the writing can be read. The following is my rendering:

(1) *Year 3, third month of inundation, day 10. The King of Upper and Lower Egypt, Lord of the Two Lands, ʿAkkhkeprurēc beloved of [Neferkheprurēc??], (2) the Son of Rēc Nefernefruten beloved of Wan[rēc?].*

(3) *Giving praise to Amūn, prostration before Onnophris, (4) by the wēcb-priest, scribe of the divine offerings of Amūn in the House of ʿAkkhkeprurēc (5) in Thebes, Pawaḥ, born of Iotefsonb. He says:—(6) My heart desireth to see thee, thou lord of the shawab-trees, when (7) thy throat taketh the northwind. Thou givest satiety without(?) (8) eating, thou givest ebriety without(?) drinking. (9) My heart desireth to see thee. My heart rejoices, O Amūn, (10) thou champion(?) of the poor man. Thou art the father of the (11) motherless, the husband of the widow. (12) Agreeable it is the pronunciation of thy name. It is (13) like the taste of life. It is like the taste of bread to the child. (14) a loincloth to the naked. [Thou?] art like the taste of.....-wood (15) in the season of the heat. Thou art like.....(16) with.....a father of his..... Thou art like the taste of.....(17) the Ruler, the breath (of freedom) to a [man] who has been in prison. Peaceful is (18).....the man of virtue..... (19)..... Turn thyself(?) to us, thou lord of eternity! Thou wast here ere (20) (aught) had come into existence. Thou art here, when they are..... Thou causest me to see a darkness*

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a I saw AHG

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Handwritten hieratic script line 16

Handwritten hieratic script line 17

Handwritten hieratic script line 18

Hieratic graffito from the tomb of Pere at Thebes, ll. 1-18.

Scale of hieratic, rather more than 1/2.



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Hieratic graffito from the tomb of Pere at Thebes, ll. 19-33.

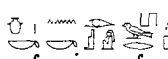
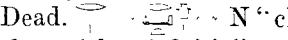
Scale of hieratic, rather more than 1/2.

A HEART SCARAB OF THE MNEVIS BULL

By W. SPIEGELBERG

With Plate iv, Fig. 2.

It has long been known that the Egyptian funerary ritual treated the deceased sacred animals in the same way as the human dead. The Apis and Mnevis bulls were embalmed like men, and their funerary outfits, including the sarcophagus and the funerary gifts, were not much different from those of the Egyptian king or noble. We know that in the Eighteenth Dynasty a cat was provided with a Canopic box (*Rec. de trav.*, xiv, 174), and that in the Nineteenth Dynasty the dead Apis bull was provided with Canopic vases¹ and even with shawabti figures² to take his place in husbandry in the other world.

I owe to Mrs. Grant Williams the kind permission to publish here a unique scarab of brownish quartzite, now in the Toledo (U.S.A.) Museum of Art, which proves that even a heart scarab was provided for the sacred animals. The inscription³ on the bottom of the scarab shown in the figure reads  *ib·k n·k Wsir Mr-wr p[n]* "thy heart belongs to thee, O Osiris Mnevis," referring of course to Chapter XVI of the Book of the Dead.  N "chapter of giving the heart to N." The Mnevis bull is designated by the epithet "Osiris" as the dead bull (Ὀσορομνεῖς Serap. Pap.), the contrary of the *Mr-wr nḥ*, "the living Mnevis," who was fed in the Mnevis sanctuary at Heliopolis. Thus there can be no doubt that the scarab belonged to the mummy of a Mnevis bull, who needed after his death this magical weapon in the realm of Osiris just as did any human being. No doubt the object comes from the Serapeum of the Mnevis bulls in the neighbourhood of Heliopolis, from which site so many monuments have found their way to the dealers' shops in Cairo in recent years.

Another Mnevis scarab, though not a heart scarab, published in PETRIE, *Heliopolis*, Pl. xxxvi, is now in the Egyptian Museum at Manchester (No. 5413). It is of blue faience and has upon its base a bull. Miss Crompton tells me that according to the Museum inventory its provenance is Heliopolis (not Kafr Ammar), and this makes it probable that the bull represented may be the Mnevis.

¹ MARIETTE, *Serapeum de Memphis*, Pl. 1 ff.

² *Op. cit.*, Pls. 7, 11, 19: some of them show a bull's head.

³ It seems that the inscription is not quite finished: whether my restoration at the end is right may be doubtful.

GREEK SIGHTSEERS IN EGYPT

BY M. ROSTOVITZ

The Zenon papyri are inexhaustible. After many surprises a letter of Apollonios telling Zenon to get ready for the visit of two distinguished parties of foreigners who were coming to see the wonders of Fayyûm (H. IDRIS BELL, *Symbolae Osloenses*, v, 1927, 1 ff. of the reprint)! Two parties, both of them very interesting indeed. One—the *θεωροί* of Argos, the other—the ambassadors of Paerisades, king of Bosporos. Let me say a few words on both of them.

Bell in his excellent comments has not noticed that we have an excellent parallel to the *θεωροί* of Argos in the famous Eudoxos of Cyzicus, a Columbus of antiquity, the merchant-explorer who was for a while in the service of Ptolemy Euergetes II. Posidonios (JACOBY, *Fr. Gr. Hist.*, 87 F 28, 10) in speaking at length of the romantic and fascinating story of Eudoxos says as follows: ἀμάρτυρα δὲ ταῦτ' εἶναι φήσας καὶ Εὐδοξόν τινα Κυζικηνόν. θεωρὸν καὶ σπονδοφόρον τοῦ τῶν Κορ.εῖων ἀγῶνος, ἐλθεῖν εἰς Αἴγυπτον ἱστορεῖ κατὰ τὸν δεῦτερον Εὐεργέτην. συσταθῆναι δὲ καὶ τῷ βασιλεῖ καὶ τοῖς περὶ αὐτόν, καὶ μάλιστα κατὰ τοὺς ἀνάπλους τοῦ Νείλου θαυμαστικὸν ὄντα τῶν τοπικῶν ἰδιωμάτων ἅμα καὶ οὐκ ἀπαίδευτον. It is exactly the same situation as in the case of the *θεωροί* of Argos. And of course Eudoxos's real reason for coming was not to take part in the celebration of the ἀγῶνες or to see the sights but some diplomatic mission under the pretext of such *θεωρία*¹. In the case of Argos and of Ptolemy II this is evident. Ptolemy tried by every means in his power to stir up the Greek cities against Antigonos Gonatas both before and after the battle of Cos. And the Greek cities greatly needed the grain and the help of Philadelphos.

And now Paerisades and his ambassadors! What kind of relations had he with Ptolemy? Let me remind the reader who Paerisades was and what were the conditions in which he lived². Paerisades was the last in the line of the glorious kings of Bosporos who made the city of Bosporos and the Bosporan kingdom in the Crimea and in the Taman Peninsula strong and rich. I say the last not because he was the last of the Spartocids, but the "last glorious" since after his death (exact date unknown, after 250 B.C.)³ troubled times begin for the Bosporan kingdom.

The Spartocids' mission was to create in the south of Russia a strong and efficient state which could stand on its own feet, independent of the Scythians, the former suzerains of the Greek cities of the Black Sea. The means for carrying out this mission and keeping alive the fire of Greek civilization in this remote corner of the world were supplied to the archons or tyrants, later, at least since Eumelos, kings of the Bosporus, not so much by

¹ The case of Eudoxos shows that the *θεωροί* of Argos did come purposely for the celebration of *some* ἀγῶνες.

² I have dealt with the history of the Bosporus in a book written in German before the war but never published. I hope to incorporate it into the second volume of my "Skythien und der Bosporus" (German translation of my Russian book of the same title published in 1927). Meanwhile the reader may look up the introduction of LATYSHEV to *Ios.*, *P.E.*, II, or the article Bosporus in *P.W.K.*, *R.E.*

³ If we may trust the mentions in the accounts of the hieropi at Delos (see p. 14, note 1) of a "phiale" dedicated by Paerisades we may assume that he was alive in 250 B.C. (the later mentions in 240 and 235 B.C. have no chronological value).

taxes as by a profitable trade with the Greek city-states, especially in grain. This grain was produced partly on their own estates, partly on the estates of the Greek residents of their cities, and partly on those of the temples. A large amount was bought from the Scythians, the Sauromatians and Maeotians and later from the Sarmatians. The Bosphoran kings were merchant-kings, not monopolizing the external trade, but playing in it the most prominent part.

As long as Athens was politically dominant the Bosphoran kings depended entirely on Athens. Athens had always the possibility of opening or closing the straits! After the Peloponnesian war the conditions changed considerably. However even after this catastrophe the policing of the sea remained the duty and privilege of Athens and Athens remained by force of tradition the greatest market in the world. No wonder that the Bosphoran rulers tried to keep up and to improve the relations which existed between them and Athens in the fifth century B.C. Of course there is not the slightest sign of any dependence of the Bosphoros on Athens in the fourth century. But there are common interests, interests vital both to Athens, which depended largely on the Bosphoran grain, and to the Bosphoros.

After the period of Alexander's conquest and of the struggle for power between his generals the situation in the Aegean Sea changed considerably. Athens is no longer policing the sea—it is Egypt and Ptolemy Philadelphos. Next in importance comes Rhodes¹. For Ptolemy the South-Russian market had but slight importance. Commercial relations between Egypt and the Bosphoros existed, as they existed also between Egypt and the south shore of the Black Sea (witness the many Egyptian or Alexandrian articles found in South Russia; on this subject Professor B. Farmakowsky gave an interesting paper at the international archaeological meeting at Alexandria in 1911), and there was a constant exchange of ships between Alexandria and the harbours of the Black Sea², but in the main Alexandria, in this unlike Athens, was not the least dependent on the great grain market of South Russia.

It might be expected therefore that the Alexandrian kings, grain merchants as they were, would be hostile to their rivals of the Black Sea. Their staple article was also grain, their market was exactly the same as that of the Bosphoran kings. And yet as our letter seems to show there was no such thing as rivalry between Alexandria and Pantikapaëum. The relations were friendly. Why?

The explanation is evident. Commercial rivalry did not exist between the Ptolemies and the Spartocids. The production of grain was too small in the ancient world to meet the demand, and there was a certain limit beyond which the exploitation of the customers by those who controlled the market was not supposed to go. To let enemies starve was a recognized right of the ancient states. But to let friends or allies starve or to cheat them beyond measure was against the ethics of Hellenistic times.

¹ On the relations between Rhodes and the Black Sea see Dio Chrys., *Rhod.* (xxxI), 103. Compare the inscription set up at Bosphoros by the Rhodians in honour of King Paerisades II (*Jos., P.E.*, II, 35). Note also that Paerisades II appears as donor of a phiale at Delos in 250 B.C. (*I. Gr.*, XI, 2, 287, B 127 ff. and Add., 149; cf. F. DURRBACH, *Inscriptions de Délos, Comptes des Hiéropes*, 1926, 298, 95-96 (with note); 313, 74). It is however interesting that in 250 Paerisades appears in the list of donors along with Antigonos Gonatas and Stratonice, the daughter of Demetrios Poliorketes (comp. G. GLOTZ, *Rec. d. Et. Gr.*, XXIX, 1916, 315, note 5; F. DURRBACH, *Inscr. de Délos*, 298, 83-88 with bibliography). Cf. also the Delian inscription of the same time in honour of a Bosphoran citizen, *I. Gr.*, XI, 4, 609. Cf. 1143. Does it not show that after the battle of Cos Paerisades went gradually over to the side of Antigonos?

² Compare the story of Sarapis and of his Sinopian origin, *Fr. Hist. Gr.*, III, 487, cf. *Polybios*, IV, 38. On the recent finds of Egyptian objects of Ptolemaic and Roman times in S. Russia, see B. TOURAIEV, *Rec. arch.*, 1911; A. V. SCHMIDT, *The New Orient* (Russ.), 13-14, 1926, p. 342 ff.

Now, there is no doubt that Egypt alone was not able to cover all the needs of the various Greek markets. The grain production of Egypt was not large enough. No wonder that the second largest productive area of the world—the Bosphorus—was thriving and prosperous even in the time of the Ptolemies¹. The Ptolemies dominated the sea and the market, they did not monopolize the market and did not intend to.

Of course their toleration of the Bosporan trade was conditioned, exactly as such toleration used to be in the time of Athenian domination. The Ptolemies did not object to the Bosporan king selling his grain but did not extend this indulgence to everybody. To the friends, not to the enemies! Grain was too powerful a weapon in the hands of Philadelphos to let it slip out of his hands and to allow the Bosporan kings to counteract the measures which he took. Thus a frequent interchange of embassies between Alexandria and Pantikapaum was a necessity. No doubt the ambassadors—in this exactly similar to the *theoroi* of Argos—discussed with Apollonios, the *dioketes* (finance minister) of Ptolemy, some political and economic problems, especially the management of the grain market, and this is the reason why Apollonios was so anxious to keep them in good mood and to satisfy their curiosity as regards the temples, pyramids and the sacred crocodiles of the Arsinoite nome.

We must not forget that for Philadelphos in his struggle with Syria and Macedon the alliance of such a powerful king as Paerisades was not indifferent. Paerisades no doubt held under his control the Black Sea and might have interfered any moment in the affairs of Thrace and of its Greek cities, the neighbours and the vassals of Macedon. As an ally of Macedon Paerisades might have been dangerous to Egypt inasmuch as he could help with his grain many Greek cities, especially those of the islands, and thus make them independent of Philadelphos. Last but not least, the excellent gold of the Spartocids was welcome in Alexandria, and the Alexandrian merchants were eager to supply with their articles the rich customers of the Bosphorus².

As regards the vexed question of the date of the battle of Cos the new document brings no decisive evidence. The battle of Cos did not ruin utterly the influence of Egypt on Aegean affairs. And thus an embassy to Egypt is natural even a short time after the great battle. However as I say no decisive evidence is forthcoming from our document. The only point which seems to be evident is, as Bell has pointed out, that the embassies could not possibly be sent at the time of a great naval contest between Macedon and Egypt. And I may add that probably the embassy of our document was one of the last. As the Delian documents show (see p. 14, note 1), Paerisades very soon neglected his old friend Ptolemy for the new star Antigonos.

¹ It is shown by the beautiful graves of the Spartocids of this time near Pantikapaum, by the enormous mass of gold and silver stored in them, and by the fact that the Scythian graves of this period are as rich as those of the Bosphorus.

² Comp. the relations between Philadelphos and Ziaelas of Bithynia, DITTENBERGER, *Syll.*, 456. I wonder that Pontow has considered it possible to date the Delphian decree, DITTENBERGER, *Syll.*, 439, in honour of Paerisades and Kamasarye in the time of Paerisades II. It is well known that the Paerisades of the Delphian inscription is one of the Bosporan kings of the second century, the same who gave so many gifts to the Didymaeon Apollo.

OBSERVATIONS ON THE CHRONOLOGY OF THE ROMAN EMPERORS IN THE SECOND HALF OF THE THIRD CENTURY

BY ARTHUR STEIN

Although various investigations have shown that to determine with any degree of exactness the reigns of the Roman Emperors from Philip to Diocletian is an enterprise beset with difficulties, it is nevertheless worth while to establish what can serve as a reasonably secure basis for further research. This is the more advisable in view of the remarks of H. Mattingly¹, who, in the interests of a hopeless theory, is prepared to sacrifice the solid foundation of facts.

The dispute is concerned specially with two points, in regard to which I was compelled and, even after his renewed defence, am still compelled to reject Mattingly's hypothesis; and since he now adduces new arguments I must reply with new counter-arguments, which, I hope, can only contribute to a further clearing of the position. These points are: (1) that Gallus and Volusian in their coinages carried on the regnal years of Decius as their own, and (2) that in the Alexandrian coins of Valerian and Gallienus by the first regnal years of the Emperors was meant the Egyptian year 252/3.

I noted as an objection to the first hypothesis the fact that Mattingly, on that assumption, is compelled to postulate for the reign of Gallus and Volusian a period of scarcely a year, whereas they reigned over two years. Mattingly himself, in his new article (p. 16), now withdraws the estimate which he made in *Num. Chron.*, 1924, 119, for Aemilian, whose first year is therefore not 251/2 but 252/3; hence he was not recognized in Egypt as Emperor until some time before 29 August, 253. I can only express surprise that Mattingly did not draw the corollary from this conclusion. For, if his explanation be accepted, we are faced with a hiatus; year 3 of Gallus and Volusian would then be 251/2, year 1 of Aemilian, according to his modified view, 252/3, or rather merely July and August, 253. Then how is the larger part of the year 252/3 to be filled, since there are no coins of the fourth Alexandrian year of Gallus and Volusian? Mattingly seems indeed to consider it possible that in Egypt after Gallus at first Valerian and Gallienus were recognized, then Aemilian, and after his fall in the autumn of 253 Valerian and Gallienus once more. But even granting that our literary evidence for Aemilian's success and end is exiguous, yet we must not so far disregard it as to turn upside down everything that this scanty evidence offers.

It is therefore not the fact that this evidence is insufficient to invalidate Mattingly's conclusions. All the accounts we possess contradict most flatly the assumption that

¹ My refutation of his criticism in *Num. Chron.*, 1924, 119, which I developed in *Archiv*, VIII, 11-13, is assailed by M. in this *Journal*, XIII (1927), 14-18. Although full recognition must be accorded to the excellent spirit in which he conducts his polemic, his attempt to contest what is well established induces me to offer the above observations. I hope that he, whom I value as a distinguished and deservedly esteemed numismatist, will not feel himself in any way personally affected by my words, which are directed purely to the point at issue. *Plato amicus, amicioi veritas!*

Valerian was recognized in any part of the Empire, above all in Egypt, so early as 252, Aemilian not till nearly a year later, in July, 253. Specially true is this of the statement made unanimously (save for the quite obvious clerical error in Syncell. 715, *τριετηῆ* for *τριμήνη*) alike by the Greek historians, the Latin epitomators, and the chronographers, to the effect (with unimportant variations) that Aemilian reigned about three months (see my statement of the evidence in *Archiv*, VII, 43 f.). Now Valerian was not elevated by his troops until after he had received from Gallus the commission to oppose Aemilian¹. If this event is to be placed, with Mattingly, in 252, one must assume that between the elevation of Aemilian and his recognition as Emperor 10-11 months elapsed, which nobody will believe when he reads that Aemilian, as soon as he was hailed Emperor, marched on Italy in great haste (*μετὰ πολλοῦ δὲ τάχους*, Zosim., I, 28, 3; *ἀντίκα...ἔσπευδε*, Zonar., XII, 21), and that immediately afterwards occurred the decision against Gallus and Volusian.

If then Mattingly admits that Aemilian was not recognized in Egypt till July or August, 253, Valerian cannot have passed there as Emperor so early as 252. On the contrary, the datings in Egypt must have been by Gallus and Volusian till well into the year 253, and there should therefore be coins and papyri of their fourth year, which as a matter of fact is not the case.

In this connexion I should like to call attention to another contradiction in which Mattingly involves himself. He answers my reference to the many papyri dated in the second year of Gallus by the statement that there is a double system, (1) the official one of the coins, which describes 251/2 as year Γ, and (2) the unofficial, according to which the same year was year B. But how does Mattingly account for the fact that we possess papyrus documents of year Γ of Gallus and Volusian²? Is he going to declare that the dates of all these papyri are those of the official system, whereas, just as uniformly, all the papyri with year B follow the unofficial reckoning? But if the third year in the papyri is that of the unofficial system, then, since such papyri occur from both the beginning and the end of this year, there should be at least some of the corresponding Alexandrian coins of the fourth year, which, as I have just shown, for another reason also ought to be in evidence if Mattingly's explanation were sound.

That we possess coins of the sixth year of the era of Dacia only for Valerian and Gallienus, not for Gallus, and for Aemilian only of the seventh and eighth years, gives us pause, as Mattingly says. But even here we must in any case reject the idea that dates were reckoned by Valerian more than a year before Aemilian. The mention of the sixth year on the former's coins is due therefore, as is assumed also by Pick (*Antike Münzen von Nordgriechenland*, I, 4) and regarded as possible by Mattingly himself, to hastily cut or damaged stamps with "an. XI."

The non-occurrence of a xv year on the coins of Aemilian from Viminacium can prove nothing, inasmuch as we cannot certainly determine either the exact starting-point of this era or the day of Aemilian's death. Mattingly assumes "before the end of

¹ Only this sequence has any authority in our sources: any other combination is quite in the air. Whoever therefore declares the literary evidence too scanty to contradict this renounces the possibility of using these sources (Zosim., I, 28, 29; Zonar., XII, 21, 22; Joann. Antioch., *Erc. de insid.*, 110, 60 DE BOOR; Petr. Patr., *Erc. de sept.*, 264, 158 BOISS.; Ept. de Caes., 31, 1; Vict. Caes., 31-32, 1; Eutrop., IX, 5-7; Hieron., *Chron. Olympe.*, 258, *Chronogr.*, a. 354) at all, even in connexion with the official documents of the first rank, among which, as M. rightly remarks, the coins are to be placed.

² P.S.L., VII, 795 (1 Sept.), Oxy., XIV, 1640-17 Oct., VIII, 1119 - WILCKEN, *Chrest.*, 397 (22 Aug.); also an ostracou, TAIT, *Archiv*, VII, 224 - no day mentioned.

September"; Pick, *op. cit.*, 25, says, more cautiously, "Herbst 239"; it is therefore quite possible that Aemilian, who, in my opinion (cf. *Archiv*, VII, 44), reigned until September, 253, had already fallen at the moment when the xv year began at Viminacium.

Mattingly's theory arose purely from the effort to explain the coins of Gallus and Volusian with "tr. pot. III" and the absence of their Alexandrian coins of the second year: and it rests solely on these considerations. I do not wish to lay too much stress on the consideration, no doubt a *pis-aller*, that in the first case there may be an error of the die-cutter, and that for the second attempts at an explanation have been made, which, it is true, do not satisfy Mattingly. But, however that may be, his theory, as will have been seen, is confronted by insuperable obstacles; there is in fact, given the state of the case, nothing left us but to return to the supposition not only that it was not till after August, 253, that Valerian and Gallienus actually came to the throne, but that it was only then that they were recognized even in Egypt.

I will not repeat the proofs that Valerian's year A was 253/4; this holds good for the papyri not only "sometimes" (p. 17) but always: there is no other reckoning either in P. Strassb. 7, 8, 10, 11 ("seem," says Mattingly) or in Oxy. XII, 1407 (the Egyptian date in this document does not refer to the same year as the consular date); on the contrary, P. Strassb. 10, for example, gives the date 16 Oct. (268) for Claudius's first year¹, and hence reckons Gallienus's sixteenth year as 268/9, his first year therefore as 253/4. If this is the case, then the coin dates also rest on no different basis; for Macrianus's year A = Valerian's year H in P. Lips. 57 just as in the Alexandrian coins (M.'s table, p. 15). A double method of reckoning does not occur, as I have shown in detail in *Archiv*, VII, and *Klio*, XXI, 78-82, till the period after the death of Gallienus, although it is just for this period that Mattingly refuses to entertain it. If he contests this, without bringing for this particular point any really new counter-arguments², he does so once more on the ground of his thesis, that the first year of Valerian was 252/3, against which therefore the preceding lines are primarily directed.

¹ M. does indeed call this date "irreconcilable with the evidence of Alexandrian coins"; but it is the "evidence" of M.'s combinations, not the "evidence" of the coins, that is affected.

² It seems to me inadmissible to use the dates of the Gallic pretenders to solve these subtle chronological questions, since these dates, as M. himself rightly remarks (*cf.* too my article *R.E.*, III, 1658 f., 1666, VI, 703 f.), are uncertain.

NOTE ON THE FOREGOING

BY H. MATTINGLY

As a friendly correspondence has failed to bring Dr. Stein and myself nearer agreement, we must leave our controversy to the judgement of scholars. I should just like to add a few words on the weakest point in my argument, on which Dr. Stein has naturally concentrated his attack—the events of A.D. 252–253.

Aemilian's Egyptian coins, which are not rare, are all of the second year: they point to a reign beginning in August. If this is August of the year 253, Aemilian's reign extended to the end of October or later of that year: our authorities agree in giving him about three months. But the inscription from Gemellae in Numidia quoted by DESSAU, *Inscriptiones Latinae Selectae*, 531, shows us, on October 22nd, 253, a dedication to "Victoria Augusta for the safety of our lords Valerian and Gallienus" made by soldiers of the *legio III Augusta*, who have returned from Rhaetia to Gemellae. The dedication is made by a part of the army, which had been concentrated in Rhaetia by Valerian against Aemilian. The victory of Valerian, then, must lie some months back from October 22nd, 253. Aemilian's Egyptian years, then, are not 252/3, 253/4, as suggested in my article: so far as Dr. Stein's attack on my views depends on this dating, it ceases to be effective¹.

Aemilian's years in Egypt must, therefore, be 251/2, 252/3, as I had at first thought. His revolt was not such a momentary affair as our fragmentary tradition might suggest. He revolted in August, 252, and drew Egypt and probably the East at large with him². Trebonianus Gallus sent Valerian to Rhaetia to rally the German armies to his aid. Neither Aemilian nor Valerian reached Italy that autumn. In 253 Aemilian got his blow in first and defeated Gallus with little difficulty. After a short pause, perhaps for negotiations, Valerian followed and defeated Aemilian with equal ease. Aemilian may have been Emperor by the end of March, 253, and a corpse by the end of June.

[Dr. Stein sends us the following comment on the above:—

The argument which M. here thinks decisive against my theory is the inscription from Gemellae, but in point of fact it proves nothing for his assumption that Valerian was hailed Emperor before the end of August, 253. What he says beside about Aemilian—who in his opinion revolted in Egypt as early as August, 252, and immediately struck coins, but cannot have been Emperor before March, 253, and was killed by the end of June—has not the least support in our sources, either in the authors or in the evidence of the coins. *Editor.*]

¹ Dr. Stein places the defeat of Aemilian in September, 253: this is barely, if at all, reconcilable either with the Egyptian coins or with the inscription just quoted. But, even if he were right, it would still remain certain that the *dies imperii* of Valerian is before the end of August, 253—and that is the vital point.

² The mint of Dacia had apparently ceased to strike for Gallus, even before Aemilian's revolt. Viminacium may have held out for some months for Gallus. The date of its era is not later than September: Philip, who died about the end of September, 249, lived long enough to have a year XI, 249–250. Hostilian, who certainly died within a short time of his father, Trajan Decius (probably died July, 251), has a year XIII, 251–252, which his father has not. Trebonianus Gallus, Aemilian and Valerian all have a year XIV (252–253).

CHRONOLOGICAL PITFALLS

By J. G. MILNE

The arguments used in the discussion on third century chronology suggest some observations on the necessity of investigating the value of Egyptian evidence in such a matter.

As regards the use of papyri, there is a risk of giving too much weight to the dates of isolated documents. The Egyptian scribe was liable to err, as we all are: and he was more likely to go wrong in dating than a modern clerk, since dating by regnal years is more difficult than by calendar years, as anyone who has had to do the former can testify: moreover, I should doubt whether the standard of education was as high in the Egyptian local government service as it is in the English. From over thirty years' experience I know that it is not infrequent for a slip to be made in the date of an English official document, and I should expect such slips to be more frequent in ancient Egypt. So, if a date which does not fit in with the received chronology is found on a papyrus, it should not be hastily assumed that it points to the existence of a variant system.

In this particular case, much use has been made of the reckonings in P. Strassb. 7, 8, 10 and 11, which are treated as supporting one another: but in fact they should be regarded as representing two separate problems. P. Strassb. 11 is written on the back of 10, and depends on that for its dating: it is not to be taken as an independent piece of evidence.

P. Strassb. 7 and 8 must be considered with P. Strassb. 6: these three give a list of payments of the same tax for the same people to the same official, as a rule in two instalments each year, from 2 Valerian to 1 Tacitus. From the form of the documents and the editor's description, it would appear that the representatives of the payers from time to time went through the local archives and jotted down copies of the entries they found there: in any case, it is clear that the lists are later compilations from old papers; and the two entries for each year are always treated as coming under the same regnal date, except where a new scribe begins a new list—at the first entries on 7 and 8. It may be assumed that the scribes were working on somewhat the same scheme as the compiler of the table of reigns in P. Oxy. 35 verso, who ignored all broken years: but it is noticeable that the schemes of the three papyri do not fit: the last entry in 6, and the last in 7 if the editor's restoration is correct, are of years which could not exist on the schemes followed for previous entries: so 7 and 8 start with entries dated on a different scheme. In view of these facts the chronological value of P. Strassb. 6, 7 and 8 seems small.

P. Strassb. 10 thus becomes isolated: and with regard to it there only needs to be added, to what has been said above about the general liability to error, the further reminder that personal idiosyncrasies in dating are not unknown. There are people who refuse to recognize a change in the calendar, or an alteration in government, and persist in adhering to the old system in defiance of official orders: and the conditions of Egypt in the middle of the third century would give much opportunity for such intransigence.

On the numismatic side, the use of Alexandrian coins for dating is often marred by the tendency to estimate the activity of the mint by the number of specimens to be found in Museums, or, in other words, by the number of different types used in any year. On this theory, coins of 12 Nero would be very rare, as only two types of billon and two of bronze were struck, and the ordinary collection naturally is content with a specimen or two of each: as a matter of fact, the billon coinage of this year was enormous, as may be seen by reference to the tables in *Historical Studies (B.S.A. Egypt)*, II, 30-4. As I have more than once pointed out, the general rule at Alexandria was that, the busier the mint, the fewer were the types used. The coins of Aemilian, though there are several types, are very rare, and the blundered inscriptions and uncertain portrait suggest that they were struck very soon after the news of his recognition was received at Alexandria, and ceased to be issued before there was time for correct models to come to hand.

Further, the fact that no Alexandrian coins of the second year of Gallus are known is no reason for suggesting that another system of dating was used at the Alexandrian mint than that which makes 2 Gallus = 251 2. A blank year at that mint is not unique: in the reign of Septimius Severus there were several close together, in years 7, 14, 18 and 19: and even when coins were struck, the output varied greatly: under Severus Alexander it dwindled down almost to nothing in years 8 and 9. So it seems unnecessary to hunt for Alexandrian coins to be assigned to 251/2.

It must also be noted that the Alexandrian mint did not issue coins at the same rate all through the year, so far as can be judged from the statistics for broken periods, such as 68/9, when the proportions of the issues are, roughly:—1 Galba (2 months) 6: 2 Galba (5 months) 3: 1 Otho (3 months) 3: 1 Vitellius (2 months) 1: 1 Vespasian (2 months) 2. So the fact that there was a considerable output of coins of 1 Claudius II, almost equal to that of 15 Gallienus, does not prove anything as to the respective amounts of the Egyptian year covered by these two periods: and the joint total of the two is less than that of 2 Claudius. My impression is that the mint of Alexandria was usually busier in the summer than in the winter: and this might be accounted for by the need of coin to pay taxes in the last three months of the Egyptian year.

The foregoing warnings are of general application to the study of the chronology of Roman Egypt: two notes on questions arising in the present discussion may be added.

Some years ago I tried to prove that Gallus continued to use the regnal years of Decius, and brought in the evidence of the coins of Viminacium and Dacia: but I found that this raised more problems than it solved. And the dating of these coins is hopelessly careless: I lately found a coin of Viminacium, of Philip, which was clearly inscribed ANIII: the engraver of course meant ANVI, but he did not engrave that.

The Egyptian dates of Vaballathus are of no help in this problem. He was not recognized in Egypt till some time in his year 4, which was equated with year 1 of Aurelian. His years must run from his assumption of power at Palmyra, and, unless any evidence is obtained as to his Palmyrene dating, they do not elucidate Egyptian chronology.

ON EGYPTIAN FISH-NAMES USED BY GREEK WRITERS

BY D'ARCY WENTWORTH THOMPSON

From Herodotus, Strabo, Diodorus, Athenaeus and Xenocrates we can compile a long list of Egyptian fishes, but of many of these we are told nothing but their names. A few, such as ἔγγελος and κεστρεύς, are plain ordinary words, and these offer no ambiguity, for the eel and the grey mullet are common fishes of the Nile. Others, like γλανίς, θρίσσα, γάρκη, σίλουρος, are more or less familiar words, usually open to easy and safe identification; but it is another matter when these names are applied to Egyptian fishes, for those fishes to which the Greek names usually belong are not found in the Nile. The best we can then do is to look among the fishes of the Nile for similar or analogous species; but we may still be in doubt as to which bore the original and which the borrowed name.

The older scholars and naturalists had their eyes open to the puzzle of these Greco-Egyptian words, but they knew that they were groping in the dark for want of better knowledge of Egyptian fishes. Rondeletius, for instance, speaking of the fish *Alabas* (p. 434), says: *Alabas...et alii infiniti pisces quorum nominibus supersedeo, nobis ignoti. Sed admonendi sunt studiosi alios ideo incognitos esse quod nobis peregrini sunt, ut Nilotici qui e mari in Nilum subierunt: alii aliorum locorum proprii. Quamplurimi corruptis nominibus apud Plinium, Athenaeum, Aristotelem in exemplaribus nostris leguntur.*

Greek or so-called Greek fish-names come to us mostly through Oppian (the Cilician), through Athenaeus and his cosmopolitan friends, and from parts of Aristotle's *Natural History*, which parts (especially the Ninth Book) are often of doubtful authenticity or alien origin. Indeed the well-known fact that the eel is the only fish mentioned in Homer might suggest that the early Greeks cared little for fish, and that their language was far from rich in words relating thereto. On the other hand the Egyptians were famous in Herodotus's time (II, 139) for their dried and salted fish; and Lucian again (*Navig.*, 16) bears witness to the excellence of their τάριχοι. Diodorus (I, 52) tells us of the vast quantities of fish caught, such that the curers, τοὺς προσκαρτερούοντας ταῖς τარიχείαις, could scarce keep pace with them, and counts no less than twenty-two different kinds from Lake Moeris alone. The export of fish, dried or otherwise prepared, was one of the busiest trades of antiquity. Moreover Greek sponge-fishers ply their trade in Alexandrine waters to-day, and so may they have gone to and fro in very early times. In short, even apart from travellers' tales of Egyptian fishes, there were plenty of opportunities for Egyptian fish-names and Semitic and other strange names besides to mingle with the Greek, coming in as part and parcel of the old *lingua franca* of Levantine mariners.

Fish-names are among the words peculiarly open to borrowing and to all the vicissitudes of *Volksetymologie*, as the sailor, the merchant and the fisherman bandy them to and fro. Even our own vocabulary draws its fish-names from many languages, with no little corruption and confusion; the Fr. *limande* becomes our "lemon" or lemon-sole, and *cod*, *torsk* and *saithe*, all three of them names of the cod in as many languages, become with us the names of as many species of fish. Nor should we forget that fishermen and huntsmen sometimes cling to very ancient words, as old (so to speak) as Babel. Who shall say from

what language, or from what group of languages, such world-old words as *tunny*, *seine-net* or *σαγήνη*, *byssus*, *seria* or *τευθίς* originally came?


As for the Egyptian fishes themselves our stock of knowledge has been growing ever since the days of Forskål and of Geoffroy St. Hilaire, and it may be said to have been at last completed by Dr. G. A. Boulenger's exhaustive monograph¹. Besides Dr. Boulenger, MM. Claude Gaillard, Victor Loret, Ch. Kuentz, Pierre Montet and others, not to speak of Brugsch, Budge and the other great Egyptologists, have put many old Egyptian and Coptic fish-names within our easy reach, and also the vernacular Arabic, in which traces of Old Egyptian speech remain.

Here is a rough list of fishes attributed to the Nile by the Greek writers, one or more of them, whom I have mentioned above:

ἀβραμῖς	λάτος, λάτως
ἀλαβῆς, ἀλλάβης, <i>Alabeta</i>	λεπιδωτός
βαίων (Hesych.)	λύχνος
βοῦς (Strabo)	μαιώτης
βωρεύς (Xenocr.)	νάρκη
γλανίς	ὀξύρρυγχος
ἔγχελυς	πέμφηρίς (Numen.. <i>ap.</i> Athen.)
ἐλεωτρίς	σαπέρδης
ἔψητος	σίλουρος
θρίσσα	σιμός (Xenocr.. Artemid. <i>On.</i> 14)
κεστρεύς	συνοδοτύς
κιθαρός	τύφλη
κορακῖνος	φάγγρος, φαγγώριος (Strabo)
κυπρίνος	φύσα
	χοῖρος (Strabo)

There are a few names in this list whose ascription to an Egyptian source seems plain and certain; many more lend themselves to conjecture; others again seem to be quite obscure. Let us see what we can make of them, one by one.

ἀλαβῆς, ἀλλάβης (Athen., 312 b, Geopon., xi, 7). This is obviously an Egyptian word, as M. Chassinat and others have already shown². It represents the O.Eg. *rcpi*, or *lрпи*, which becomes in Sahidic **ⲗⲁⲃⲏⲥ**, and in Bohairic **ⲗⲉⲓⲣⲓ**. M. Chassinat points out that in the *Papyrus magique de Londres-Leyde*, ix, 9, the same word occurs in its demotic form, *lbs* or *labis*, and is spoken of as *lbs gm*, i.e. the *black labis*. The Egyptian name survives in Modern Arabic, under such forms as *labis*, *labees*, *labîsu*, *lébsa*, *lebes*, *lips*. Forskål quotes an Arabic form *halavi*, which, as Coraes has already remarked (*ad* Xenocr., p. 176), is not to be distinguished from ἀλαβῆς. *Alabeta* (Plin., v, 9) is again the same word.

Athenaeus (301 c, d) speaks of a fish *λεβίας*; he describes it as *μέλας τὴν χροῖαν*, and declares it to be identical with *ἥπατος*. I have little doubt that *λεβίας* is but another form of the same Egyptian word; and the black colour of Athenaeus's fish goes some way towards supporting this identification. I am further inclined to suspect (*meo periculo*) that Athenaeus's synonym *ἥπατος* is also an Egyptian word, and no other than the O.Eg. *abtu*, a fish, , a word occurring in the Book of the Dead. On the other hand, Arche-

¹ G. A. BOULENGER, *Zoology of Egypt, The Fishes of the Nile*, London, 1907.

² E. CHASSINAT, *Un papyrus médical copte: Mém. de l'Inst. fr. d'arch. orient. du Caire*, xxxii, 1921. Cf. CL. GAILLARD, *Recherches sur les poissons représentés dans quelques tombeaux égyptiens*: *ibid.*, li, 41, 1923.

stratus (*ap.* Athen.) says that the *λεβίαις* is found round about Delos and Tenos, and if that be so it would be a sea-fish. This runs counter to my suggestion; but I am not inclined to abandon it, for the transference of a name from one fish to another is a common thing, and Archestratus is no great authority.

Another difficult, and perhaps allied word is *ἐλεφίτις*, *ἐλεφητίς*, *ἐλεφίτης* (Hipp., 357, 45). Coray (*ad* Xenocr., p. 92) would read *ἀλφηστής* here; but this suggestion is not more plausible than the other.

The fish to which these Egyptian names apply is the commonest of Nile fishes, a Cyprinoid or carp-like fish, described as *Cyprinus niloticus* by Forskål (*Descr. animalium etc.*, 1775), and re-described as *Labeo niloticus* by Cuvier. According to Isidore G. St. Hilaire, the name *lebse* is used generically by the Arabs at Asyût, where the fishermen speak of this species as *lebse seira*, the "true lebis," and have a corresponding specific name for the allied *Labeo forskalii*, Cuv.

ἀβραμίς or *ἀβέρμις*. This is one of the Nile fishes mentioned by Athenaeus (312 a). That the name is an Egyptian word has long been known; it was known to Schemseddin Mohammed, an Arab scholar of the early sixteenth century quoted by Schneider¹, and Jablonski² and Wiedemann³ are among those who have called attention to the fact.

At the root of *ἀβραμίς* is *ραμι* (or *π-ραμι*) of the *Scala Magna*, the Coptic name of *Tilapia* (or *Chromis*) *nilotica* (L.), a common fish often to be seen on mural paintings and sculptures of the Old Empire. It is commonly known nowadays by its Arabic name *bolti*, *بلطي*; but there are several alternative names in Arabic, as there are in Coptic also.

According to M. Cl. Gaillard and others the proper name of this fish in O.Eg. is *án*; while *rm*, the O.Eg. equivalent of *ραμι*, means rather *fish* in general⁴. This word *rem* became in time supplanted, in the general sense of *fish*, by the word *abti*, of which we have spoken already; and *rem* then came to mean "the fish" *par excellence*, the most valued of all Nile-fishes, that is to say *Tilapia nilotica*, or *bolti*.

Another Coptic word for the same important fish is *ⲙⲓⲁⲓⲟⲩⲣⲓ*, retained to this day by the fishermen on Lake Menzaleh under the form *sabár* or *shabár*. *شبار*. It is not impossible that in the Greek *σαπερ-δής*, or *σαπέρ-δης*, we have the same word; and even *ζίππουρος*, or *ίππουρος*, may be related to, or corrupted from it.

There is yet another Arab synonym, *مشط*, *mest*. This is given, on the authority of MM. Loat and Kuentz, in Boulenger's *Fishes of the Nile* (p. 528) and in M. Gaillard's *Recherches* (p. 88), as a synonym of the *bolti*, rarely used in the Delta and at Cairo, but in common use at Akhmim, Girgeh and Nag-Hamadi. In the Greek-Coptic Glossary of Dioscorus, edited by MM. Bell and Crum (*Aegyptus*, vi, 179-226, 1925), we find *ἀβραμίς* glossed by *ⲙⲉⲙⲩⲥⲈ*. The editors do not explain the Coptic word; but it seems not unlikely that in *mest* we have its Arabic derivative.

The O.Eg. name *án*, *ⲁⲛ* or *'an-it*, is at least suggestive of the Gk. *ἀνθίας*. The fish-symbol which enters as a determinant into the word *án* is a very good picture of the *Tilapia* itself.

¹ J. G. SCHNEIDER, *ad* P. ARTEDI, *Synon. Piscium*, 1789, p. 322; from *Notices et Extr. des MSS. de la Bibl. du Roi*, i, 255.

² *Opuscula*, 1804, I.

³ *Sammlung der altägyptischer Wörter welche von kl. Autoren umschrieben.....worden sind*, Leipzig, 1883, p. 8.

⁴ Cf. also M. PIERRE MONTET, *Les poissons employés dans l'écriture hiéroglyphique: Bull. Inst. fr. d'arch. orient. du Caire*, xi, 46, 1913.

Mr. S. R. K. Glanville has figured (*Journal*, XII, Pl. xix, 1926) two objects, one pre-dynastic, the other of the Eighteenth-Nineteenth Dynasty, on both of which is represented a group of fishes clustered round and feeding on a rounded ball of something or other. And Mr. Glanville correlates these ancient drawings (one two thousand years older than the other) with Herodotus's description (II, 93) of the *ιχθύες οἱ ἀγελαῖοι* which migrate up and down the Nile: the males shedding their milt which the females swallow on the downward journey, while the females drop their spawn and the males swallow it on the way up. Now the fish represented on the aforesaid objects are undoubtedly either *Tilapia nilotica* or some closely allied species; and it so happens that Tilapias (among other fishes of the family Cichlidae) have the very curious habit of taking the young fry into their mouths, and lodging them there or in the pharynx for protection. There has been much dispute as to whether it be the males or the females which do this; recent evidence seems to be on the side of the females, but it would not be surprising if (in one species or another) both sexes should be found to share this parental charge. In any case, and whether Herodotus be wholly right or no, it seems very likely that he is alluding to this curious habit, and that the same is roughly depicted on the ancient objects which Mr. Glanville figures and describes.

κορακῖνος. This seems to be a plain Greek word, with no trace of Egyptian or other alien origin, but it is not easy to interpret; it is applied both to a sea-fish and to a fish of the Nile, and in neither case is its meaning certain.

Athenaeus gives us several synonyms of the Egyptian Coracine. It was called (121 c) *πέλτης* by some, and *ἡμίνηρος* at Alexandria. Another name, according to Euthydemus (308 e), is *σαπερδης*; and again it is called *πλάταξ* at Alexandria (309 a), or, according to Philotimus, *πλατιστακός* (308 f). *σαπέρδης*, as I have already said, may be the Coptic *ⲩⲁⲓⲟⲩⲣⲓ*, whence the Arabic *sabâr*; and *πέλτης* might well be the same word as survives in the Arabic *bolli*. Whether this latter word may lurk also in the Alexandrine *πλάταξ* and *πλατιστακός* is a question which we may leave alone. Now we have seen that *bolli* and *sabâr* are synonymous, and that both undoubtedly refer to *Tilapia nilotica*, which we have also identified with *ἀβραμῖς*; and this identification of *κορακῖνος* is so far supported by the account which Athenaeus and Martial (XIII, 85) give of its excellence as a food fish. For Tilapia is the best of all the Nile fishes, save perhaps the great Nile Perch (*Lates*): and there is no better fish than *κορακῖνος*, says Athenaeus, it is even *κατὰ πάντα τοῦ μύλλου κρείσσων*.

But again, the name *κορακῖνος* (though Athenaeus explains it *διὰ τὸ τὰς κόρας κινεῖν*) suggests a black or dark-coloured fish: and we have seen that the *lebis* or *ἀλαβῆς* (*Labeo niloticus*) is spoken of in the Papyri as *black*, though we might rather call it dark metallic blue. And lastly Pliny tells us (XXXII, 69) that "*coracini fel excitat visum*"; and precisely so does M. Chassinat's medical papyrus recommend, twice over, *ⲩⲩⲩ ⲡⲓⲗⲁⲕⲏⲥ ⲕⲁⲙⲉ*—"gall of the black labis"—as a remedy for defective vision.

Such evidence as we have, then, is ambiguous: and we may find reasons for identifying *κορακῖνος* either with *ἀλαβῆς* or *ἀβραμῖς*, i.e., with Tilapia or with *Labeo niloticus*. I think there is some confusion in the Greek; and I suspect that Athenaeus and his friends were none too careful in discriminating these two fishes.

λεπιδωτός. This again is a difficult fish to explain and identify. It was a sacred fish according to Herodotus (II, 72); and was the only sacred fish mentioned by him except the eel. It was identical with the carp, *κυπρίνος* (Dorio, *ap. Athen.*, 309 e): it was one of the

three fishes (together with *φάγρος* and *ὀξύρρυγχος*) which devoured the lost member of Osiris (Plut., *Is. et Os.*, xviii).

Linnaeus gave the name of *lepidotus* to the fish which we have just identified with the *lebīs* or *ἀλαβής*, Forskål's *Cyprinus (Labeo) niloticus*. This is a very carp-like fish, and it was moreover the only Egyptian Cyprinoid which Linnaeus knew; its scales are large, as in most fishes of the Carp family. Now the Coptic (Bohairic) *λεῖμ*, which survives in *lebīs*, etc., is defined in the older dictionaries (*Scala Magna*, Peyron) as *piscis squamis vestitus*, of which phrase the Greek *λεπιδωτός* would be a straightforward rendering: and the form of the word is so like an echo of *λεῖμ* or *lebīs* as to suggest that *Volksetymologie* played its part in the transliteration. On the other hand the *lebīs* was not a sacred fish, and thereby its identity with *λεπιδωτός* becomes at once improbable.

A very sacred fish was the great Nile Perch, *Perca (Lates) niloticus*, L., which Sonnini¹ was the first to identify with the *λάτος* of the Greeks, worshipped at Esneh or Latopolis. This fish is much prized for eating: according to Cuvier and Valenciennes "tous les auteurs reconnaissent que *Lates niloticus* est le meilleur des poissons du Nil. seul le 'bolty' (*Tilapia nilotica*) peut lui être comparé."

One of its names among the fellaheen near Cairo is *Keshr*, *قشر*, which signifies "fish-scales": and here M. Gaillard asks: "A-t-on donné ce nom au *Lates* parcequ'il est couvert d'un grand nombre d'écailles, ou bien y a-t-il quelque rapport entre ce nom et les sphères remplies d'écailles de *Lates* qui ont été trouvées ensevelies dans le sable de la nécropole d'Esneh, au milieu des millions de momies de ce poisson?" In either case this Arab name *Keshr* (it is only one of several) lends itself to close comparison with *λεπιδωτός*.

Athenaeus treats *λάτος* separately (311 f), and neither asserts nor denies its identity with *λεπιδωτός*. At Asyût the fish is still called *lâtes*, *لاطس*.

A third identification of *λεπιδωτός* remains. Sonnini (*op. cit.*) identified it with the *bynni*, *بيني*, *Cyprinus (Barbus) bynni*, Forskål: and Geoffroy St. Hilaire³ adopted the same identification, on the ground that "la carpe qui peut justifier le nom de l'écailleuse par excellence, celle en laquelle on admire les écailles les plus larges et les plus beaux reflets argentés, est indubitablement l'espèce publiée par Forskål sous le nom de *Cyprinus binny*." With this identification MM. Boulenger, Gaillard and Lorentz all agree.

The fishes which, as we learn from Greek writers, were held sacred in Egypt are the eel, the Oxyrrhynchus, the *λεπιδωτός*, *λάτος*, and *φάγρος*; of these the eel and the Oxyrrhynchus (*Mormyrus* spp.) are not to be mistaken. *λεπιδωτός* is sacred on the authority of Herodotus, who couples it with *ἔγχελυς*; and of Plutarch, who associates it with *φάγρος* (or *φαγώριος*) and *ὀξύρρυγχος*. Strabo (xvii, 823) says that the Oxyrrhynchus and *Lepidotus* are universally venerated in Egypt; while *λάτος* is the object of a local cult at Latopolis.

The number of fishes depicted on Egyptian monuments is large, but only three, so far as I can learn, are found as mummies: viz. the *ὀξύρρυγχος* or *Mormyrus* at Behnesa on the Bahr Youssouf⁴, the Nile Perch (*Lates*) in great abundance at Latopolis, and the *Bynni*, according to Geoffroy St. Hilaire, at Thebes. Herodotus's statement that the eel was a sacred fish is so far unconfirmed. Apart from the Oxyrrhynchus we have then three Greek names of sacred fishes, *λεπιδωτός*, *λάτος*, and *φάγρος*, and but two fishes, the *Lates*

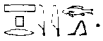
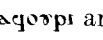

¹ *Voyage dans la Haute et Basse Égypte*, 1799, III.

² LORTET et GAILLARD, *Faune momifiée de l'ancienne Égypte: Archives du Musée de Lyon*, VIII, 189, 1903.

³ *Descr. de l'Égypte: Hist. nat. des poissons du Nil*, XXIV, 280, 1829.



⁴ Cf. LORTET et GAILLARD, I, 190.

and the Bynni, to equate with these; *λάτος* speaks for itself, and we are left with *λεπιδωτός* and *φάγρος*. *Λεπιδωτός*, as a sacred fish distinct from *λάτος*, can be no other than the Bynni: at least we seem to be following the trend of argument, and we are certainly following the chief authorities, if we so identify it.

κυπρίνος. We have mentioned the word *κυπρίνος* as synonymous (according to Dorio) with *λεπιδωτός*. It would be curious indeed if this word also had an Egyptian source; but we may at least suggest, as a possibility, a connexion with an unidentified fish-name *chepri*, . Here and elsewhere I would much rather suggest than assert, and a connexion between *chepri* and *κυπρίνος* is the merest of suggestions. I do not forget that M. Lorentz has, with no less caution or dubiety, suggested that *chepri* may be connected with  and .

φάγρος. As a sacred fish this is not to be identified. I know no O.Eg. or Coptic fish-name which resembles it at all closely; but the Arab name *baḥḥar* (بقر، بقرة) for one of the commonest of Nile catfishes (*Bagrus bajad*, Rüppell) is very like it. On the other hand Clement of Alexandria, taking the word (rightly or wrongly) to mean *greedy, gluttonous*, speaks of *φάγρος* as a voracious fish with blood-stained fins, one of the first fishes to come down with the flood-waters of the Nile. This is at once recognizable as the *kalb-el-bahr* or river-dog (*Hydrocyon*), a fierce creature found in the Lower Nile "chiefly during flood-time," with great teeth protruding though the mouth be shut, and with fins tipped with pink or orange as though they had dabbled in blood. The sea-fish mentioned under the same name by Aristotle, and still known by such corrupt names as *πάγρος*, *φαγγρί*, etc., is another thing altogether, a perch-like fish, *Sparus pagrus*, L.

βωρέυς. This fish is mentioned by Xenocrates: he is speaking of the *ταρίχια βωρίδια* which it yields, and saying of the fish itself—*οὐ καὶ ὁμοὶ ἐσθίουται*.


I do not know that anybody has pointed out the Egyptian source of the word, but it is plain and simple. The fish is the common grey mullet (*Mugil cephalus*), the *bouri*, , of the Nile fishermen; the Coptic equivalent is . In early Egyptian the word does not seem to occur, the grey mullet being called *adj*, or *adou*¹: but M. V. Loret tells us that in some late (Ramassid) papyri, the form *bari* occurs.

νάρκη. This word, which in ordinary Greek means the Torpedo or Electric Ray, is included by Athenaeus (312 b) in his list of *Νειλῶνι ἰχθύες*, and can there be no other than the well-known "electric eel," *Malapterurus electricus*. While a few other passages quoted by Athenaeus may also refer to the Egyptian fish, and while it is also possible that the *νάρκη* caught by rod and line in Oppian (*Hal.*, III. 149) may have been that species, the above brief reference in Athenaeus is the only sure and certain one: on the other hand, many passages in Aristotle and in other writers refer clearly and specifically to the Torpedo. Thus Plato, in the *Meno*, talks of *ἡ πλατεία νάρκη ἡ θαλαττία*; and Dioscorides and Galen both talk of *ἡ θαλαττία νάρκη*, as though it were necessary to distinguish it from another and fluviatile species. It is still more curious that that great physicist Hero of Alexandria, discussing the power and penetration of the Torpedo's shock, says never a word of the Egyptian fish, but speaks only of *ἡ θαλαττία*.

No O.Eg. word has been identified with the *Malapterurus*; in short, the lack of early references to this common and remarkable fish is very striking indeed. Du Bois Reymond, the great and scholarly physiologist who spent his life in the study of electrical physiology, chose as the subject of his college dissertation—*Quae apud veteres de piscibus electricis*

¹ P. MONTEI, *op. cit.*, 40.

exstant argumenta (Berolini, 1843). He quoted well-nigh all the many classical references to the *νάρκη* (save those of Oppian), and declared that, common though Malapterurus is in the Nile, and although "*antiquitas posterior ejus jam mentionem faciat.*" yet, "*neque apud Aegyptos in scripturis eorum hieroglyphicis, neque apud Graecos in mythologia eorum ex Aegypto profecta, ulla hujus piscis subesse vestigia.*" After nearly a hundred years this remains substantially true; even the O.Eg. name of the electric eel is unknown.

We have, however, in O.Eg. the word *nar*, or *narou*, , commonly applied to certain fishes of the same family as the electric eel, now called *Clarias* and *Heterobranchus*; and all these catfishes, including Malapterurus itself, have a strong family likeness, owing especially to their long whisker-like feelers at the sides of the mouth. And this *nar* may be, possibly, at the root of *νάρκη*.

The Coptic name for Malapterurus is **τρνεπρι**, given in the *Scala Magna*, of which I have nothing much to say; but it does set me a-thinking of a passage in the *Historia Animalium* (IX, 620 b), in that curious ninth book which is none the less interesting that it is non-Aristotelian and that it is replete with foreign influence. Here then we read that the *νάρκη* narcotizes, or paralyzes, the little fishes which it would overcome, *τῷ τρόπῳ ὃν ἔχει ἐν τῷ στόματι*—a phrase which seems to baffle translation, but of which no variant readings are on record. The commentators have tried to mend the text as best they could. Gaza, Camus and Schneider would all read *σώματι* in place of *στόματι*; and in my own Oxford translation of the *H.A.* I went further, and ventured to read *τρόμφ* for *τρόπῳ*, taking it to mean what Réaumur¹ called "*cette vertu du tremble.*" This seemed to make sense of the passage, and brought it into close accord with Gaza's translation: "*Torpedo pisces, quos appetit, afficit ea ipsa quam suo in corpore continet facultate torpendi.*"

But in all this effort to emend we are obviously prejudiced by the belief that the passage *must* refer to the Torpedo; it would be a different story if we should admit the possibility of the Egyptian electric eel being in question. For the electric eel is conspicuous, like other catfishes, for the peculiar structures, the long filaments, which fringe its mouth, even if they be not precisely *ἐν τῷ στόματι*. As to **τρνεπρι**, this so-called Coptic word has a very un-Coptic look. As Mr. W. E. Crum first suggested to me, it may well be corrupt Greek, and it may even help us some day to a better understanding of the Aristotelian passage.

On the same page, a few lines further down, we come to another and an analogous difficulty: where Aristotle (or rather the Ps.-Aristotle) tells us that "*the ὄνος, the βάτος, the ψήττα, and the ῥινή burrow in the sand, and after concealing themselves angle with the filaments on their mouths which fishermen call their fishing-rods; and the little fishes on which they feed swim up to these filaments, taking them for bits of sea-weed such as they feed upon.*" When I translated the passage, making the best I could of it, I gave *hake, ray, flat-fish* and *angel-fish* (i.e., *squatina*) as more or less customary renderings of *ὄνος, βάτος, ψήττα*, and *ῥινή*; but I knew that the evidence for such identification was worth very little, that any small basis it had was biassed by the confident belief that these must be sea-fishes of the Mediterranean, and I further called attention to the fact that not one of the said fishes has any barbels or oral filaments at all. There is a partial exception, it is true, in the case of the Fork-beard Hake; but this is a deep-sea fish, none too common, never likely to be watched at close quarters by the fishermen. But the whole family of Catfishes is conspicuous for the long feelers or filaments about the mouth, the long whiskers of the "cat"; and several of them are amongst the commonest fishes of the Nile.

¹ *Hist. de l'Acad. royale des sc., année 1714*, pp. 21, 22.

In short we should begin to have some hope of understanding the passage if we could suppose it to refer not to Greek but to Egyptian fishes.

Returning to *νάρκη*, we may observe that Oppian's account of how the shock travels up rod and line, *αἴψα δὲ χαιτήης ἰππείης δόνακός τε διέδραμεν ἐς θ' ἀλιῆος δεξιτερὴν ἔσκηψε*, or Claudian's account of the fisherman and the torpedo, "...damnosum piscator onus praedamque rebellem Jactat, et amissa redit exarmatus avena," or Pliny's (XXXII. 2. 1), are all just like the account given by Abd-Allatif, an Arabian naturalist of the twelfth century, of the *ra-ad*, or thunder-fish, as the Arabs still call this eel-like catfish: "A fisherman who had caught a *ra-ad* assured me that when a fish was in the net the same effect was produced without the man's hand ever touching the fish, and being indeed a span or two away from it, etc."

The Egyptian *νάρκη* is mentioned by Horapollo (II. 104), in a passage on which I have no light to throw: "Ἀνθρώπων σώζοντα πολλοὺς ἐν θαλάσῃ θέλοντες σημεῖναι, *νάρκην* τὸν ἰχθὺν ζωγραφοῦσιν· αὕτη γὰρ, ὅταν ἴδῃ τοὺς πολλοὺς τῶν ἰχθύων μὴ δυναμένους κολυμβᾶν, συλλαμβάνει πρὸς ἑαυτὴν καὶ σώζει.

σίλουρος. This word usually means, in Greek or Latin, the great Sheatfish of the Danube and some other European rivers (Ausonius speaks of it in the Moselle)—a giant member of the Catfish family; it is the great fish which took a yoke of oxen to bring it ashore (Ael., *H.N.*, XIV. 25). Its proper name in Greek is *γλανίς*: though the species described under that name by Aristotle (*H.A.*, VI. 568 a, *et al.*) is smaller than, and otherwise slightly different from the common Sheatfish of Central Europe (Ael., XI. 45). The German name of the Sheatfish is *Wels*, or *Seile*; and I have sometimes wondered whether this latter word may not be that *τίλων* or *ψίλων* of which Herodotus speaks (V. 16).—*πάπρακες καὶ τίλωνες*,—the only two words left us of the language of the old lake-dwellers.

The great European catfish which we know as the Silurus, and which Aelian and Ausonius called by that name, does not occur in Egypt, nor of the many catfishes found there is any one of great dimensions. The largest of Nile fishes is the great sacred Perch, the *λάτος* or *λάτως* of the Greeks, which has no resemblance to a catfish or sheatfish; but it so happens that Athenaeus, describing the Egyptian *Latos*, does compare it with the sheatfish in respect of size: *οἱ δ' ἐν τῷ Νεῖλῳ ποταμῷ γινόμενοι λάτοι τὸ μέγεθος εὐρίσκονται καὶ ὑπὲρ διακοσίας λίτρας ἔχοντες· ὁ δὲ ἰχθύς οὗτος λευκότατος ὢν, καὶ ἥδιστός ἐστι, πάντα τρόπον σκευαζόμενος, παραπλήσιος ὢν τῷ κατὰ τὸν Ἰστρον γενομένῳ γλανίδι.*

It is just possible that in the bare lists of Nile fishes which have come down to us, *σίλουρος* may be corrupt, or may have taken the place of another but somewhat similar word. If for *σίλουρος* we might read some such word as *σίλουχος*, we should have its prototype to hand at once, in the Coptic *ⲥⲁⲗⲟⲩⲕⲓ*. O.Eg. *sely*, *serq*, to which words we shall presently return.

On some other Siluroid fishes, or Catfishes.

Two out of the many catfishes of the Nile, not very different from one another and both very common, are *Silurus (Schilbe) mystus*, L., and *Silurus (Synodontis) schall*. It seems to have been Rüppell (1829) who gave the name *Synodontis* to this latter fish, borrowing it from Athenaeus (312 b). This is the name which the fish still goes by among naturalists, but what led Rüppell to identify it with that Greek name I do not know.

The former fish is the common Schilbe, شلبا, which word may be easily identified (if we are not troubled about the ش and ⲥ) with Coptic ⲥⲁⲗⲟⲩⲕⲓ. In the short list of fish-names in the Greek-Coptic Glossary of Dioscorus, already mentioned, we have the following fragment:τις· ⲥⲁⲗⲟⲩⲕⲓ. Here, on the Coptic side, we have a word closely akin to

Schilbe; while as to the corresponding Greek word of which only the last syllable remains, there are not more than about half-a-dozen fish-names ending in ...*τις*, and *συννοδόντις* is at least as likely as any of the others. Again the Greek fish-name *σάλπη* may well be related to the group *𐩧𐩣𐩪𐩠𐩢*, *شلب*, *𐩠𐩣𐩪𐩠𐩢*.

The second fish is what the Arabs call *sal* or *shall*, *شال*, and is the OEg. *ouhâ* (*waha*), or *ouhâou*; according to the *Scala Magna*, a Coptic equivalent is *𐩠𐩣𐩪𐩠𐩢*, a word which, according to M. Victor Loret, has not been traced to an Egyptian source. As to the Egyptian *ouhâ*, M. Loret points out that it is certainly derived, like the name for the scorpion, *𐩧𐩣𐩪𐩠𐩢* (Sahidic) *𐩠𐩣𐩪𐩠𐩢*, (Bohairic) *𐩠𐩣𐩪𐩠𐩢*, from the verb *𐩧𐩣𐩪𐩠𐩢*, to prick. With the feminine form, meaning a scorpion, M. Loret goes on to compare (from Paris MS. Copt. 44) *𐩠𐩣𐩪𐩠𐩢* = *ἰχθύδιον*, and he makes the suggestion that this *ἰχθύδιον* is the Schall. As a matter of fact, the Schall is remarkable for his three sharp and dangerous spines, in his dorsal and two pectoral fins. In Athenaeus (312 b) and in Strabo (17, 823) we hear of *φῦσα* as one of the Nile-fishes; but we are told nothing but its name. I suggest that this *φῦσα* or *πύσα*, is nothing more nor less than our Coptic *𐩠𐩣𐩪𐩠𐩢*.

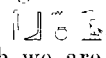
The O.Eg. word *srk*, *𐩠𐩣𐩪𐩠𐩢*, is usually determined, just like *𐩧𐩣𐩪𐩠𐩢*, by a scorpion; and just as O.Eg. *ouhâ* gives us a pair of words, one meaning a scorpion the other a fish, so does M. Montet (*op. cit.*, 46) now show us that the scorpion-word *srk* is alternatively determined by a fish, *𐩠𐩣𐩪𐩠𐩢*, and that fish (in the Temple of Sethos I at Abydos) is one of the catfishes. M. Montet identifies it with *Clarias anguillaris*, in which, however, there is nothing scorpion-like; but he likewise identifies with *Clarias* the fish called *nar*, which we have taken to mean, more generally, one fish or other of the family—including (that is to say) the Schall itself. Is it possible that the *𐩠𐩣𐩪𐩠𐩢*, which Coptic word we only know from the *Scala Magna* and which is there ascribed to the *schall*—is it possible, I say, that we dare make a slight transposition of letters, and read in it *𐩠𐩣𐩪𐩠𐩢*, *p-serek*, the *scorpion-fish*¹! And now I find among the Arab synonyms for the Schilbe, the name *sarruk*, *شروك*, which fits like a glove to our O.Eg. *p-serek*, or *p-sarek*; and we know that the Schilbe has the same sharp spines, only somewhat shorter and less dangerous, than its close cousin the Schall. These words, by the way, lead us immediately to Scorpion-town, *P-sly*, in Greek *Ψέλκισ*, *Ψέλκη*.

Lastly we have the Coptic fish-name *𐩠𐩣𐩪𐩠𐩢* (or *𐩠𐩣𐩪𐩠𐩢*, glossed by Kircher *crabro*, *vespa*). This M. Gaillard recognizes as obviously a derivative of *sly*, but he assigns it (on somewhat slender grounds) to a very different fish, *Petrocephalus bane*, i.e., *اس*, *ايحجد*, *بنا*, of which fish the O.Eg. *bes* is a well-known and well-authenticated name. I should be inclined to put all these names together, notwithstanding that there is some uncertainty as to their precise specific attributions.

M. le Page Renouf identifies the late word *𐩠𐩣𐩪𐩠𐩢* (*aha* (or *aba*, as he transliterates it), with the Schall (*P.S.B.A.*, xv, 105, 1885); but other and more recent writers are quite sure that the name and symbol apply to *Lates niloticus*, which fish is very plain, in the form *𐩠𐩣𐩪𐩠𐩢*, on the bas-relief of Médûm (FL. PETRIE, *Medum*, Pl. 12, etc.).

I am inclined to think that the name applies to both fishes, and that the Schall is as clear in M. le Page Renouf's transcription from the Royal Sarcophagus (B.M. No. 32) as *Lates* is in the bas-relief of Médûm.

¹ I think it far from unlikely that the word *scorpio* itself may hark back to an Egyptian ancestry. Whether any of the Greek fish-names derived from *scorpio* (*σκορπίς*, *σκορπίος*) (*cf.* Athen., 320 f) be identical with our Egyptian scorpion-fish is a doubtful matter.

νωτίδανος. In the genus *Synodontis* (to which we refer both the Schilbe and the Schall) one or two species have the remarkable peculiarity of swimming on their backs, belly upwards; and they are often so depicted in the old temple fishing-scenes. Exposure to light discolours or darkens the belly of the fish; and this fact is expressed in the Arab name *sâl baten soda*, "the *schall* with the black belly," transliterated into the zoological cognomen *Synodontis batensoda*, Rüppell. M. V. Loret, in a foot-note to M. Gaillard's book, points out the curious fact that an O.Eg. verb *sbw*, meaning to "fall upon one's back," is always written with the sign of the fish as its phonetic determinant; and further that an O.Eg. fish-name, *sebnow*, , derived from the verb, must in all probability refer to the very fish of which we are speaking, namely *Synodontis batensoda*. There are two other fishes in Egypt, and only two, which have the same curious habit: but one of them is all but identical with *S. batensoda*, while the other is altogether different. The latter, according to M. V. Loret, is never represented on the monuments, while *S. batensoda* is frequently depicted, and *always upside-down*.

It is just possible that all this may throw new and much needed light on a couple of fish-names recorded by Athenaeus (294 d), *νωτίδανός* and *έπινωτιδεύς*, the one from an Aristotelian fragment, the other mentioned by Epaenetus, who was a poet of the cookery-book and very likely an Egyptian. In the former fragment: 'Α. κεντρίνην φησὶ τινὰ γαλέων εἶναι τὸν νωτίδανόν, which I suppose we may translate: "Aristotle says that *Centrina* is a sort of shark called (also) *Notidanus*." In the other case, as Athenaeus puts it: 'Επαινετός ἐν Ὀψαρτυτικῷ, ἐπινωτιδέα καλεῖ, χείρονα δ' εἶναι τὸν κεντρίνην καὶ οὐσώδη· γιωρίζεσθαι δὲ ἐκ τοῦ πρὸς τῇ πρώτῃ λοφία ἔχειν κέντρον, τῶν ὁμοειδῶν οὐκ ἔχοντων. It is not clear how much of this comes from Epaenetus and how much is added by Athenaeus or by the scribe. We seem at any rate to be told that *νωτίδανός* or *έπινωτιδεύς* is a fish known by a sharp spine in its front fin, a structure which the allied species—presumably of sharks or dogfish—do not possess. With sea-fish and Mediterranean fish in our minds it is of sharks or dogfish that we cannot help thinking; and we find that among these only one small family possess spines in their dorsal fins. The only species of this family which need concern us are the common Picked Dogfish, or "Spur-dog," *Acanthias vulgaris*, Risso (*Squalus acanthias*, L.), generally identified with the Gk. *ἀκανθίας*; its close relation *Spinax niger*, a fish fairly common in the Mediterranean; and the rarer *Centrina Salviani*. But all of these fishes, and all the rest of the sub-family to which they belong, not only possess *two* dorsal fins, but have a strong, sharp, conspicuous spine in the fore-part of each of these two fins: the distinctive character, according to Epaenetus, of possessing a spine or spur, *πρὸς τῇ πρώτῃ λοφία*, does not hold. Not only that, but as soon as we free ourselves from the obsession that we have to do with a shark or dogfish of some sort or other, we begin to see that the words *νωτίδανός* and *έπινωτιδεύς* can very ill bear the meaning we have read into them, namely that of fishes with a spine in their dorsal fin.

We do not know for certain, and may never know, to what fish or fishes these names actually belonged; but I am inclined to think that they were Alexandrine names, translated or adapted from some older Egyptian name, for the fish we are speaking of, *Synodontis batensoda* or one of its closest allies. The two Greek words become simple and clear, I think, if we may apply them to a fish which swims upon its back (*νωτόν*); and our Synodont agrees not only in this character but in other two—being armed with sharp-pointed spines in its fins, and being of poor quality or unpleasant taste. The Synodonts have a spine in the front part of the single dorsal fin, and they also have a powerful spine in each pectoral fin, close to the head. We must admit that *λοφία* ought to mean a *dorsal*

fin; but in this case the whole three spines make a sort of common armature which, making some allowances for inaccuracy, may be deemed covered by *πρὸς τῇ πρώτῃ λοφίᾳ*.

I would suggest, then, that we might take the Aristotelian fragment over again, and translate it freely: "There is a certain fish called *Notidanus*, because it swims upon its back (*νωτον*); it is a fierce, predaceous or shark-like fish (*γαλέος*); and because it is armed with a sharp-pointed spine (or spines) it is also called the Prickle-fish (*κεντρίνη*)." All this tallies precisely with what we might say, or might expect to hear, of that close ally of the Schall, *S. batensoda*.

In the second fragment Epaenetus likewise associates the fish which he calls *ἐπινωτιδεύς* with *κεντρίνη*; and speaks furthermore of the evil taste or smell of one or other. We have not far to seek for confirmation; for M. Gaillard tells us of the Schall: "sa chair est peu estimée; il n'y a guère que les indigènes de très humble condition qui ne la dédaignent pas." We are reminded of Juvenal's reference (iv, 32) to the Egyptian Silurus, which he says fetches but a poor price: "magna qua voce solebat Vendere municipes fracta de merce siluros."

As to *κεντρίνη* or *κεντρίτης*, it is usually taken to mean in Greek the Picked Dogfish (*ἀκανθίας*), and that may be its meaning in certain passages. But after all, it is only a simple descriptive word, which suits any "prickly" fish; and it is, as near as may be, the precise equivalent of the Eg. *p-slq*, and the other words which we have associated with it.

τύφλη (Athen., 312 b), *τυφλίνος* or *τυφλίνης* (Hesych., Marcell. Sidon.), is another Nile fish of which we are told nothing but the name. The *ὄφεις τυφλίνος*, or *τύφλωψ*, of Aristotle and Aelian is another thing altogether, and is pretty safely identified as the Sheltopusik or Blind Lizard, *Pseudopus Pallasii*. There is no blind fish either in the Nile or in the Mediterranean; nor any which might conceivably give rise, for other reasons, to the epithet *τυφλός*. I suspect another case of *Volksetymologie*, with Coptic *ⲧⲉⲉⲧ* at the bottom of it. *ⲧⲉⲉⲧ*, as we have seen, means "a fish" in general; we might perhaps go further, and suggest *ⲧⲉⲉⲧ-ⲗⲉⲓⲣⲓ* as a possible basis for the Greek name.

σίμος. We find in Kircher's list of fish-names *ⲡⲓⲥⲧⲙⲟⲥ*. *شومس*. *forella*; and this Coptic name looks as though it were the self-same word as *σίμος*, mentioned as an Egyptian fish by Athenaeus (312) and also by Xenocrates—if we read with Coraes *κητώδεις σίμος* for MS. *κητωδεσίμους*. The fish *σίμος* is also mentioned by Oppian (*Hal.*, I, 470) and by Artemidorus (*Oneirocr.*, II, 14); but in no case have we any clue to its identification, save only what the epithet *κητώδεις* may give. *ⲥⲧⲙⲟⲥ* looks like anything but a Coptic word; and I quote it merely to suggest that *σίμος*. *ⲡⲓⲥⲧⲙⲟⲥ*, may both be plain ordinary Greek: that, in short, the borrowing may here have gone the other way.

Menominia.

In Johannes Cassianus, *De coenobitorum institutionibus*, iv, cap. 22 (Migne, XLIX, 183), we read of the industry and frugality of the Egyptian monks, *quibus maxima cura est operis, and apud quos... pisciculi minuti saliti, quos illi menominia vocant, summa voluptas est*. For *menominia*, however, the text reads *maenidia*, and an editorial foot-note explains: *menominia habent plerique codices, vocabulum Latinis incognitum; pro quo Ciaconius maenidia reposuit, non improbabili conjectura*. Wiedemann refers to the passage¹, but throws no light upon the word: "ägyptisch ist das Wort jedenfalls bisher nicht aufgefunden worden."

¹ *Sammlung der altägyptischen Wörter welche von kl. Autoren unschrieben oder übersetzt worden sind*, Leipzig, 1883, p. 29

The word however does occur, in the well-known Coptic-Arabic Glossary, Paris MS. 44: $\mu\alpha\iota\mu\omicron\mu\epsilon\mu\eta\iota$, منحمة . Whether or no it be connected with $\mu\alpha\iota\upsilon\varsigma$, at least the meaning tallies. $\mu\alpha\iota\upsilon\varsigma$, which Hesychius identifies with $\sigma\mu\alpha\rho\iota\varsigma$, is some small and worthless fish, or sometimes the small-fry of larger fish; it was the food of the poor, and *maugra mendole* is still a contemptuous saying in modern Italian. The synonymy of the word is discussed by Coraes (*ad Xenocr.*, p. 83).

The word *menomina*, or $\mu\alpha\iota\mu\omicron\mu\epsilon\mu\eta\iota$, may be a reduplicated or may be a compound word. The syllable *men* might suggest comparison with $\mu\epsilon\upsilon\epsilon\phi\omega\theta$ ($\mu\epsilon\mu\cdot\epsilon\phi\omega\theta$), an alleged name for the crocodile, found in the Chronicon Paschale (Migne. xcii. 385); and this again with the puzzling crocodile-name which MM. Bell and Crum read as $\beta\alpha\iota\upsilon\epsilon\phi\omega\theta$, and which is equated with 𐩠𐩨𐩣𐩪 (*i.e.*, $\chi\acute{\alpha}\mu\upsilon\sigma\alpha$) in their Dioscorus Glossary. This word $\beta\alpha\iota\upsilon\epsilon\phi\omega\theta$ has been lately discussed by Spiegelberg (*Zeitschr. f. äg. Spr.*, 1926. 35), who accepts the word unhesitatingly, sees in it with as little hesitation the word $\beta\alpha\iota$, the soul, and comes to the singular conclusion that the latter part of the compound word is the name of the God Nephotes, Nfr-htp, out of which (by a mis-reading of $\mu\epsilon\phi\omega\theta$ for $\mu\epsilon\phi\omega\theta$), the word $\epsilon\phi\omega\theta$ has been coined. I prefer to believe that $\epsilon\phi\omega\theta$ is a well-authenticated word for a reptile, especially the Snapping Turtle, *Chelydra tringuis*, and is the O.Eg. 𐩠𐩨𐩣𐩪 , *apeš*, as Brugsch stated it to be.

$\mu\epsilon\upsilon\epsilon\phi\omega\theta$ is a curious word, with a curious history. The passage in the Chronicon Paschale relates to the prophet Jeremiah, earth from whose grave was supposed to heal the bites of crocodiles; and it occurs also in Epiphanius and Dorotheus, all of whom borrowed the quotation, according to Du Cange, from a certain "auctor MS. de xvi prophetis." Epiphanius has it. $\omicron\upsilon\varsigma\ \kappa\alpha\lambda. \omicron\iota\ \text{Αἰγύπτιοι Νεφῶθ}$, "Ἕλληνας δὲ κροκοδείλους, a point in Spiegelberg's favour. But when we turn to the others we find $\omicron\upsilon\varsigma\ \kappa\alpha\lambda. \omicron\iota\ \text{Αἰγύπτιοι Μενεφῶθ}$ (*lege μὲν ἐφῶθ*), "Ἕλληνας δὲ κτλ. In short, the word $\mu\epsilon\upsilon\epsilon\phi\omega\theta$ vanishes away, while $\epsilon\phi\omega\theta$ is more or less, though not completely, substantiated. This point was noted by Lauth in his paper on Horapollo (*SB. Bayer. Akad.*, 1876), but seems to have been overlooked or forgotten.

Summary.

We see then that many Greek names of Egyptian fishes, and not a few other Greek fish-names besides, are not to be explained by Greek philology but are often similar, and closely similar, to Egyptian words. That $\acute{\alpha}\beta\rho\alpha\upsilon\iota\varsigma$, $\acute{\alpha}\lambda\alpha\beta\iota\varsigma$ and $\lambda\acute{\alpha}\tau\omicron\varsigma$ (especially the former two) are Egyptian words has long been known to scholars. I have suggested that $\acute{\alpha}\nu\theta\iota\alpha\varsigma$, $\beta\omega\rho\epsilon\upsilon\varsigma$, $\eta\pi\alpha\tau\omicron\varsigma$, $\lambda\epsilon\beta\iota\alpha\varsigma$, $\pi\acute{\epsilon}\lambda\tau\eta\varsigma$, $\sigma\acute{\alpha}\lambda\pi\eta$, $\sigma\alpha\pi\acute{\epsilon}\rho\delta\eta\varsigma$, $\tau\acute{\upsilon}\phi\lambda\eta$, $\phi\acute{\alpha}\gamma\rho\varsigma$, $\phi\upsilon\sigma\alpha$ are all likewise Egyptian words; and I have suggested, but more doubtfully, that $\epsilon\lambda\epsilon\phi\iota\tau\iota\varsigma$, $\zeta\acute{\iota}\pi\pi\omicron\upsilon\rho\omicron\varsigma$ (or $\acute{\iota}\pi\pi\omicron\upsilon\rho\omicron\varsigma$), $\kappa\upsilon\pi\rho\acute{\iota}\nu\omicron\varsigma$, $\nu\acute{\alpha}\rho\kappa\eta$ and $\sigma\acute{\iota}\lambda\omicron\upsilon\rho\omicron\varsigma$ may also be Egyptian.

There remain a good many other analogous cases which I have not discussed in this paper. For instance *Acipenser* = $\chi\acute{\iota}\rho\epsilon\eta\text{-}\rho\epsilon\eta\eta\eta$: $\acute{\alpha}\mu\iota\alpha$ = *mehi*, *mhit*: $\beta\acute{\alpha}\kappa\chi\omicron\varsigma$ = *abaχ*; $\beta\omicron\upsilon\varsigma$ (Strabo) = *bout*. 𐩠𐩨𐩣𐩪 ; $\rho\acute{\alpha}\iota\alpha$ = *ru*; $\sigma\acute{\alpha}\rho\gamma\omicron\varsigma$ = *srq*: $\chi\acute{\alpha}\nu\eta\alpha$ = *chua*; $\phi\upsilon\kappa\iota\varsigma$ = *p-ukas*, Copt. 𐩠𐩨𐩣𐩪 (*i.e.*, pickled fish): all these are examples of apparent similarity between the Greek and the Egyptian word, which I suspect (though with varying degrees of confidence or assurance) to be true cases of equivalence.

AN AGRICULTURAL LEDGER IN P. BAD. 95

BY M. SCHNEBEL

In P. Bad. 95 Bilabel has made accessible a document of the greatest importance for agricultural procedure. The document in question furnishes the annual balance-sheet of a large estate for four consecutive years, 8th–11th indiction, in the seventh century A.D.

The papyrus contains the financial statement of a *προνοητής*. *Προνοητής* in later times, according to GELZER, *Stud. z. Byz. Verw. Aegyptens*, 87, was “not a standing estate-manager but a tax collector engaged by contract; *προνοησία* is the tax district within a *possessio*.” The owners of the estates in our document therefore may very well have possessed other landed property falling within the province of one or several other *προνοησῖαι*. Here of course we can deal only with the estate for which an account is rendered in P. Bad. 95, and this is the estate meant in the sequel when the “total estate” is mentioned. From the 10th indiction onwards this estate is divided in the balance-sheet into two parts, *Προτάμου δωρεά* and *Πρόσοδος τῆς Μακαρίας*. The reason why will be told immediately. The contents are as follows:

- | | |
|-----------------------------------------------------------------------------|-----------------------------------------------|
| ll. 1–152: account of the 8th indiction for the total estate ¹ . | |
| 153–253: account of the 9th indiction for the total estate ¹ . | |
| 254–265: receipts in kind | } of the <i>δωρεά</i> for the 10th indiction. |
| 266–278: receipts in cash ² | |
| 279–297: disbursements in kind | |
| 298–342: disbursements in cash | |
| 343–395: account of the <i>δωρεά</i> for the 11th indiction. | |
| 396–407: receipts in kind of the <i>πρόσοδος</i> for the 11th indiction. | |
| 408–433: receipts in cash of the <i>πρόσοδος</i> for the 10th indiction. | |
| 434–472: disbursements of the <i>πρόσοδος</i> for the 10th indiction. | |
| 476–520: disbursements of the <i>πρόσοδος</i> for the 11th indiction. | |

From this division it becomes obvious in the first place that the papyrus cannot have been written till after the 11th indiction, and this is confirmed by the insertion at l. 463 of a rebate³ for the 8th–11th ind. into the account for the 10th ind., to the amount of 12 nomismata *παρὰ* 48 *κεράτια*. We shall see later⁴ that it is a question of an annual rebate of 3 nom. *παρὰ* 12, which here in the 10th ind. includes also the reckoning for the 11th ind.; this could scarcely have been done if the account for the 11th indiction had not been drawn up at the same time as that for the 10th ind. Moreover, our document is a fair copy, and so not an original. That seems to me proved by the fact that in l. 241 the total is given as 77 nom. 15 ker. (in reality it tots up to 77 nom. 5½ ker.), while at

¹ Bilabel, P. Bad. 4, p. 148: “[*Προτάμου δωρεά*?].” That will not suit, since ll. 1–253 contain the receipts and disbursements both for the lands included under the *δωρεά* in the 10th and 11th indictions and for those which are counted in these years under the *πρόσοδος*.

² Bilabel, P. Bad. 4, p. 148, assigns ll. 265–278 to the *πρόσοδος*, wrongly, in my opinion, since the receipt total of l. 278=80 nom. 11½ ker. is reckoned in the account for the *δωρεά*, l. 341.

³ *κουφ*/ in ll. 115, 116, 235, 236, 313, 314, 326, 370, 374 should be resolved with WILCKEN, *Archiv*, VIII, 92, into *κούφ(ων)*=jars, elsewhere into *κούφ(ισμοῦ)*=rebate.

⁴ Cf. p. 39.

l. 247 it appears as 77 nom. $15\frac{1}{4}$ ker., the error of $\frac{1}{4}$ ker. having been corrected for no visible reason. Further, at l. 363 in the account for barley, the total disbursement stands at 41 artabas, though the true reckoning amounts to 48 artabas, but the balance is given correctly as $58\frac{1}{2}$ artabas, which demands a total disbursement of 48 artabas.

In our document the receipts are not presented item by item every year—*perhaps* for the reason that the receipts were fixed once for all by written instructions from the estate management to the *προνοητής*, as in the case of a *προνοητής* of the Apion family, whose request for appointment in the year 583 A.D. is preserved for us in P. Oxy. I. 136 (= WILCKEN, *Chrest.* 383)¹. Only in the 8th and 10th ind. are these details given. On the other hand the receipts in kind of the *πρόσοδος* are not stated in the 10th ind. but are so stated in the 11th ind. This second detailed statement of receipts after the 9th ind. is probably introduced only for the reason that the 10th ind. introduces another apportionment of the net product (ll. 521 ff.) and in consequence from the 10th ind. onwards the total estate is divided for accountancy purposes into *δαρεά* and *πρόσοδος*. For while the net product of the total estate in the 8th and 9th ind. is divided in equal portions between three *comites*, i.e., one-third to each, this same division into one-third each is made in the 10th and 11th ind. only in the case of the net product of the *πρόσοδος* (ll. 521-31), whereas that of the *δαρεά* falls one-half to one of the *comites*, Germanos, and to the two others one-quarter each². The cause of the change in the ratio of apportionment may have been due to a change of ownership arising in the 10th ind.; for while in the 8th and 9th ind. the proprietress of the estate (*κύρα*) occurs several times, and disbursements are made to her order³ (e.g., ll. 75, 181) and payments booked for her private account

¹ Cf. GELZER, *op. cit.*, 87.

² That can be proved by calculation from our document :

Net product in kind from the *δαρεά* for the 10th and 11th ind. (ll. 296-7, 362-3):

$$295\frac{1}{2} + 203\frac{2}{3} = 499\frac{1}{3} \text{ artabas of wheat,}$$

$$92 + 58\frac{1}{2} = 150\frac{1}{2} \text{ artabas of barley.}$$

Apportioned to the *comes* Germanos at the rate of $\frac{1}{3}$, to the two other *comites* at $\frac{1}{3}$ each (ll. 535 ff.): 499 $\frac{1}{3}$ art. of wheat, [150 $\frac{1}{3}$] barley, i.e., the net product of the *δαρεά* in kind for the 10th and 11th ind. (l. 536 perhaps to be completed [ρν L] instead of [ρν Δ]). Then the sum agrees exactly for the barley too and corresponds to the computation of the half at [75 $\frac{1}{2}$] art. in l. 538, which is assured by l. 543. The figures for the quarter shares of the barley artabas in l. 538: [οε] and l. 539: οε are in any case wrong, and can be corrected from ll. 546, 548, where 37 $\frac{1}{2}$ occurs. The figure contains a small error of $\frac{1}{15}$ or $\frac{1}{3}$ such as is often found in P. Bad. 95.)

The same scale of apportionment can be shown for the net product of the *δαρεά* in cash for the 9th and 10th ind. as for the product in kind. From the total net product of the whole estate for the 8th and 9th ind. as well as from the net product in cash of the *πρόσοδος* for the 10th and 11th ind. (ll. 521 ff., 365 nom. 5 $\frac{1}{2}$ ker. are available, according to l. 531. Of this amount the *comes* Germanos receives (ll. 532-4) 121 nom. 22 ker., the other two 121 nom. 22 ker. (i.e., $\frac{1}{3}$) each.

From the total estate the *comes* Germanos receives in cash for the whole four years 154 nom. 4 $\frac{1}{2}$ ker., the other two each 138 nom. 1 $\frac{1}{4}$ ker. (ll. 544-8).

There remains therefore still to be assigned :

For the *comes* Germanos 32 nom. 6 $\frac{1}{2}$ ker., for the other two each 16 nom. 3 $\frac{1}{2}$ ker. That is exactly the half and quarter each of 64 nom. 13 ker. = the net product of the *δαρεά* in cash for the 10th and 11th ind., i.e., 33 nom. 21 ker. + 30 nom. 16 ker. (ll. 342, 396).

³ Bilabel supplies (cf. note on l. 62) *ἐξ(οδισμοῦ)* and takes the sense to be "expenses, expenditure." But in l. 107 occurs: *ἐξ(οδισμοῦ) τῆς ἀ(ἰ)τῆς τῆς γεωργίας* "Ἀρ ωνος!) κερ άτια) 5 (αἰτῆς=κύρας from l. 103), i.e., not expenditure for the Mistress but for agricultural purposes. One could, however, translate *ἐξοδισμός* by "order for disbursement," as in *Archiv*, IV, 117, 14 (cf. PREISIGKE, *Wörterbuch*, s.v. *ἐξοδισμός*). In that case such disbursements would be made upon written instructions signed by the Mistress, while the frequently occurring term "*ἀγρ(ά)φων*" would mean disbursements without such written authority. (Cf. l. 166: *ἀγρ(ά)φων* τῆς κύρας.)

four pay partly in one and partly in the other¹. Among the receipts we find the rent of an oil-mill and of a bakery, also more than once hire for stables and *κέλλια*. This last term the editor would translate cellars, but rooms could also quite well be meant. The receipts, however, derive chiefly from payments for lands. As we are not told their extent, it is unfortunately impossible to ascertain whether such payments were high or low.

Let us now turn to the consideration of disbursements, which by their nature could not remain stable but varied from year to year. The individual figures for disbursements must first be ascertained and then brought into relation with the receipts. The first items entered in every account year, whether in kind or cash, and whether for the total estate or for *δωρεά* and *πρόσοδος*, are the deductions for the *δημόσιον*, *i.e.*, the state taxes. The fact that a part of the payments of the *coloni* are deducted for the state by the landlord is, as a matter of fact, only a continuation of the practice followed *de facto* in Ptolemaic and in Roman times. In leases of this period between private landowners and their private lessees the express condition is frequently found that the landowner assumes responsibility for the state taxes, naturally taking it out of the rent. The taxes in the 9th and 10th ind. amount to:

In kind:

ll. 157, 436	ὑπὲρ δημοσίου Ἐρμουπόλεως	104 $\frac{2}{3}$ art. wheat ²
158, 280	„ „ Πέσλα	74 $\frac{1}{6}$ „ „ ²
159, 437	„ „ Ἐρμουπόλεως διὰ τοῦ ἀπαιτητοῦ σιτικῶν	108 $\frac{1}{4}$ „ „ 287 $\frac{1}{8}$ art. wheat worth
		1 $\frac{1}{2}$ ker. the art. = 17 nom. 22 $\frac{3}{4}$ ker.

and in money:

ll. 189, 448	ὑπὲρ δημοσίου τῆς κτήσεως Ἐρμουπόλεως	13 nom. παρὰ 1 $\frac{3}{4}$ = 12 nom. 22 $\frac{1}{4}$ ker.
190, 299	„ „ Πέσλα σὺν κώμης οἴκοις	6 nom. 18 ker.
191, 449	ὑπὲρ ναύλου	1 nom. 1 $\frac{1}{4}$ ker.
	Total yield of taxes	38 nom. 16 $\frac{1}{4}$ ker.

¹ The fruit grower of Thalmoon, the *γεώργιον Συμβίχως*, the *γεώργιον Πανίτ* and the heirs of Sarrion, see ll. 259, 272, 400, 402, 403, 405, 414, 415, 421, 423. Whether in addition the debtor of ll. 401 and 418 is the same person I do not venture to decide.

² The item *ὑπὲρ δημοσίου Ἐρμουπόλεως* is assigned (as also in the 11th ind., see l. 477) two amounts, 104 $\frac{2}{3}$ and 113 art. In the rating of the *ναύλου* for these artabas (ll. 191, 449, 495) stand these words: *ναύλου τῶν σί(του) (ἀτραβῶν) ρδ. καθαρ. νόμισμα; α κέραια; ad.* Bilabel hesitates in his notes to ll. 191 and 495 between *καθαρ(όν)* and *καθαρ ὦν)* as the resolution of *καθαρ*. Now the sums in the individual entries in P. Bad. 95 are quoted either in nomismata *π* παρὰ *γ* or in nomismata *π* keratia *γ*, and from the sum totals and the conversions therein made into *καθαρά νομίσματα* it becomes clear beyond a doubt that the numbers after *παρὰ* signify keratia to be subtracted, while in entries nom. *π* ker. *γ* the keratia are to be added. In entries without keratia the nomismata in the individual entries are termed *εὔσταθμα, ἡμερ καθαρά*, while the expression *καθαρά νομίσματα* is employed exclusively for a total of nomismata worth 24 keratia each in cases where keratia are deducted or added in converting a sum of nomismata, and is *never* used in single items. There is therefore to my mind no ground whatever for assuming a deviation just at ll. 191, 449 and 495, for resolving *καθαρ* into *καθαρ ὦν)* and applying it to *νόμισμα*. It is rather to be construed with *ἀτραβῶν* and to be resolved into *καθαρ ὦν)*. In that case it is expressly stated that the 104 $\frac{2}{3}$ artabas are clean wheat. We know moreover that only carefully cleaned grain was accepted in tax payments. The 113 artabas must therefore have been wheat not yet cleaned. While however in the 9th ind. only 104 $\frac{2}{3}$ art. are reckoned in the summing up, in the 10th and 11th ind. the whole 113 artabas are reckoned; so the *προνοητής* has doubtless overlooked an error of 8 $\frac{1}{3}$ artabas to the detriment of the estate owners. The difference of 8 $\frac{1}{3}$ artabas is the same as the deficit of the receipts due in kind for the 9th ind. as compared with the 10th and 11th ind., but no connexion can be established between these two amounts. The item *ὑπὲρ δημοσίου Πέσλα* always figures in the same terms at 77 $\frac{1}{6}$ and 74 $\frac{1}{6}$ art. (ll. 158, 280, 346).

In the 11th ind. also the tax yield is the same, for in my opinion l. 494 is to be completed: *νομίσματα* [γ π(αρά) α] Ld. As above remarked, the taxes always stand at the beginning of the disbursement items. Line 495 contains the *ναῦλον* for the 104 $\frac{3}{8}$ clean artabas, therefore this entry must have been preceded by the money tax for the *κτῆσις* (cf. ll. 448-9). The separation of these two entries in the 8th and 9th ind. by the disbursement *ὑπὲρ δημοσίου Πέσλα* (not, however, in the 10th and 11th ind.) is to be explained by the fact that the latter entry belongs to the account for the *δωρεά* and is quoted there in the 10th and 11th ind. as well (ll. 299, 361), while the money tax for the *κτῆσις* and the *ναῦλον* are assessed under the *πρόσδος*. The wording of l. 494 I cannot restore; it must have been much shorter than that of ll. 445-8 which have the same purport. Assuming the correctness of the supplement in l. 494, the same tax total and the same tax items result for the 11th ind. as for the 9th and 10th ind., ll. 346, 365, 477-8, 494-5. Since we shall see that in the 11th ind. the receipts of the total property suffered severely from an insufficient inundation, the continuance of the state burdens at the same figure is very remarkable.

Of the total tax yield for the 9th-11th ind., amounting to 38 nom. 16 $\frac{1}{4}$ ker., 17 nom. 22 $\frac{3}{4}$ ker., or almost 47.36 %, are defrayed in kind, while we have seen above that payments in kind figure at only 23.55 % of the quota of receipts. The state obviously, even in later times, set a particular value on receiving the payments in kind, being in need of these for the provisioning of Alexandria and Constantinople. For the 8th ind. we must assume a smaller total yield of taxes, seeing that the *γεώργιον τοῦ Ὀνιανίσκου* was not added to the total estate till the 9th ind. Nevertheless, the money taxes are exactly the same as in the 9th-11th ind. Although therefore the *γεώργιον τοῦ Ὀνιανίσκου* was subject only to money payments and indeed to the considerable amount of 47 nom. 10 ker. (l. 277), the taxes in kind in the 8th ind. must have been lower than in the last three years. That inference ought to have been patent from the entry *ὑπὲρ δημοσίου Πέσλα*, for later on the *γεώργιον τοῦ Ὀνιανίσκου* counts as part of the *δωρεά* and its taxes are found under the *δημόσιον Πέσλα* (ll. 280, 299, 346, 365). Unfortunately this entry for the 8th ind. has not survived and col. 4 shows too many gaps precisely in the figures for a restoration to seem possible¹.

Disbursements for taxes are most often, but not always, followed by those for rebates (*κουφισμοί*), but the latter do not always stand one after the other as with tax disbursements. These rebates are in no single case deducted under the receipts from the item to We must assume that this tax also was paid in clean grain. While therefore the difference between cleaned and uncleaned wheat amounts in the case of *δημόσιον Ἐρμουπόλεως* to some 7.37 %, in the case of *δημόσιον Πέσλα* it amounts to only 3.89 %. This difference cannot to my mind be explained only by difference in kinds of wheat which is what Bilabel supposes in his note to l. 157. So long as we do not know for certain how the *αθ/* which frequently occurs in these taxation entries should be resolved (the resolution into *ἄθλαστος* [with the translation "unthreshed"] as Bilabel tentatively proposes, *loc. cit.*, seems to me rather risky in view of l. 346 where 77 $\frac{1}{8}$ art. *ῥυπαροῦ* are equated with 74 $\frac{1}{8}$ art. *ἀθ/ σίτου*), we shall hardly be able to find a basis for the right solution. In the case of the taxes paid to the *ἀπαιτηγῆς σιτικῶν* there stands always only one figure.

¹ Since disbursements always begin with the tax items, the two lost lines at the beginning of col. 4 are to be restored according to ll. 157-8:

(a) *ὑπ(έρ) δημοσίου Ἐρμουπόλεως σί(του) (ἀπράβαι)*. The pertinent numbers are 104 $\frac{3}{8}$ art. clean wheat and 113 art. "ἀθ/"; which of these two numbers was counted in the reckoning up it is impossible to say.

(b) *ὑπ(έρ) δημοσίου Πέσλα σί(του) (ἀπράβαι)*.....

l. 56 is to be restored, at least as far as its sense goes (cf. l. 159):

[*ὑπ(έρ) δημοσίου Ἐρμουπόλεως δ(ιὰ) τοῦ ἀπαιτηγῆς σιτικῶν*] [*σί(του) (ἀπράβαι) ρηγ'*].

Since the tax items of l. a and l. 56 in the 10th and 11th ind. are counted under the *πρόσδος* and refer consequently to land thereto belonging, and since these pieces of land underwent no change in the

which they refer—perhaps because the individual items were laid down for the *προνοητής* on the part of the landowners—but are always entered as disbursements, although they were not really so. For example, when Victor of Pois in the 11th ind. (ll. 401, 486) has his whole rent remitted to him, that happens because he cannot pay, and it is out of the question that he paid the rent, which was then made over to him again. Because of these remittances the impression given by the receipts is a little falsified, some of them recurring annually during the four years covered by our document, so that a difference arises between estimated and real receipts. Here we must mention particularly the receipts from the Panit estate, which figure among the receipts at 13 nom. *παρὰ* 65. 104 artabas wheat, and in addition 56 artabas wheat “*ἀντὶ νομισμάτων ζ παρὰ λε*”; in the actual receipts 7 nom. *παρὰ* 35 “*ἀντὶ σίτου ἀρτάβων νς*”¹ figure as disbursement and remittance, so that in reality the receipts from the Panit estate amount to 6 nom. *παρὰ* 30 - 4 nom. 18 ker., and to 160 artabas wheat, which, at the rate of 1½ ker. the artaba. produces 10 nomismata, in all therefore to 14 nom. 18 ker., whereas in the estimate the figure stands at 13 nom. *παρὰ* 65 = 10 nom. 7 ker., 160 art. wheat = 10 nom., total 20 nom. 7 ker. Thus the actual receipts from Panit are lower by 5 nom. 13 ker. than appears from the estimate. Further annually recurring rebates are:

15 artabas wheat to the <i>πωμαρίτης</i> of Thalmoon ² (at 1½ ker.) =	0 nom. 22½ ker.
3 nom. 14½ ker. for hire of stables and <i>κέλλια</i> in Thalmoon ³	= 3 .. 14½ ..
1 nom. <i>παρὰ</i> 5 for a dovecot in Thalmoon ⁴	= 0 .. 19 ..
3 nom. <i>παρὰ</i> 12 to <i>τόπιον Κάστορος</i> ⁵	= 2 .. 12 ..
4½ ker. for <i>φόρος σπερμάτων</i> ⁶	= 0 .. 4½ ..
3 ker. to <i>γεώργιον Ἰσιδώρου</i> ⁷	= 0 .. 3 ..
1½ ker. for stable hire at Hermupolis ⁸	= 0 .. 1½ ..
	In all
	8 nom. 5 ker.
and with addition of the balance from Panit	5 .. 13 ..
	Total
	13 nom. 18 ker.

The actual receipts every year are smaller by this sum than the receipts due⁹.

9th ind. as compared with the 8th ind., we may insert in the 8th ind. for these items the same figures as in the 9th ind., and supply further.

l. 57 [*κουφ(ισμοῦ) τῶν νεοφύτων*] (*cf.* l. 161).

l. 59 [*κουφ(ισμοῦ) Ἀρρήτος*, etc., *σίτου*] (*ἀρτάβαι* *ie*) (*cf.* ll. 164, 282, 348).

l. 60 *καλαμίας* [*Θαλμούου σίτου*] (*ἀρτάβη*) *a* (*cf.* ll. 163, 281, 347).

For ll. 58, 61 and the figures for l. 62 I have no supplement to propose. For l. 61 the supplement *π(αρά)* seems improbable as we are dealing with disbursements. It might possibly treat of the same disbursement as l. 165 for the 9th ind., but that is quite uncertain.

For an approximate calculation of the figures for l. 62 see below, p. 43, note 2.

¹ See ll. 44, 87, 192, 402, 405, 423, 453, 499. l. 44 is to be restored: [*π(αρά) τῶν γε[ωργ]ῶν Πανίτ*].

² See ll. 259; 59, 164, 282, 348.

³ See ll. 26-8, 273-5; 88-97, 191, 194-202, 300-309, 366.

⁴ See ll. 33, 276; 99, 204, 310, 367.

⁵ See ll. 30, 410, 463. The rebate of 12 nom. *παρὰ* 48 for the 8th-11th ind., entered under the 10th ind., implies an annual rebate of 3 nom. *παρὰ* 12, as is clear from l. 507, where a further special rebate for the 11th ind. is deducted not from the original payment of 18 nom. *παρὰ* 72 but from 15 nom. *παρὰ* 60. Line 30 mentions a payment of 28 nom. *παρὰ* 72, which is presumably a clerical error [or a mis-reading.—Ed.], for the insertion of 18 nom. *παρὰ* 72 in l. 410 produces the sum total of estimated receipts (222 nom. 16 ker.), which remains constant for the 9th-11th ind.

⁶ See ll. 41, 420; 100, 205, 451, 497.

⁷ See ll. 426; 101, 206, 452, 498.

⁸ See ll. 102, 207, 454, 500. The quota of these dues is no doubt contained in ll. 50-3 and 429-32.

⁹ No account is taken of the annual rebate of 1½ ker. to the heirs of Sarapion, as this is a case of compensation for a service; see l. 98, where probably *κολ()* is to be read *καλίμίας*, and ll. 203, 450, 496.

The rebates not of annual recurrence are in reality not rebates at all but payments for work performed such as a new plantation, a *καλαμιά*¹. A rebate of 3 ker. in all for three years (8th–10th ind.) to an *ὀρνεοτρόφος* is indeterminate (l. 455). In the 11th ind., however, an exception can be established. In this year the land suffered badly from an insufficient inundation and consequent *ἀβροχία*, which compelled the landlords to grant heavy rebates to many of the cultivators of their estates. These rebates are several times expressly designated as *ὑπὲρ ἀβρόχου* (e.g., ll. 380, 489, 515); even when that is not the case we may assume *ἀβροχία* as the cause in the case of rebates which only occur in the 11th ind. The rebates on account of *ἀβροχία* amount to:

<i>Lines</i>	<i>Debtor</i>	<i>Amount owing</i>	<i>Rebate</i>	<i>% of debt</i>
404, 486	Victor of Pois	134 art. wheat	134	100
257, 359	γεώργιον Πλουτιώνος	96 art. wheat	48	50
402, 487	γεώργιον Πανίτ	104 art. wheat	52	50
404, 488	" "	56 art. wheat ²	28	50
515	" "	6 nom. <i>παρὰ</i> 30 ³	3 nom. <i>παρὰ</i> 15=2 nom. 9 ker.	50
263, 360	τόπιον Ἐνώχ	44 art. wheat	20	45.45
262, 361	τόπιον Ἄρωνος	108 ² / ₃ art. wheat, 100 ¹ / ₂ barley	36 ¹ / ₆ , 33 ¹ / ₂	33 ¹ / ₃
399, 483	γεώργιον Λουσιμάχου	87 ¹ / ₂ art. wheat ⁴	29 ¹ / ₆	33 ¹ / ₃
401, 485	πωμαρίτης Κενεμβάτου	6 art. wheat	2	33 ¹ / ₃
400, 484	κληρονόμοι Σαραπίωνος	80 art. wheat ⁵	26 ² / ₃	33 ¹ / ₃
414, 513	" "	1 nom.	0 nom. 8 ker.	33 ¹ / ₃
415, 514	" "	1 nom. <i>παρὰ</i> 5	0 nom. 6 ¹ / ₄ ker.	33 ¹ / ₃
403, 489	γεώργιον ἐν Συμβίχει	95 art. wheat	31 ¹ / ₃	33 ¹ / ₃
42, 421, 509	" "	13 nom. <i>παρὰ</i> 12=16 nom. <i>παρὰ</i> 8 ⁴	5 ¹ / ₃ nom. <i>παρὰ</i> 28=4 nom. 4 ker.	33 ¹ / ₃
410, 507	τόπιον Κάστορος	15 nom. <i>παρὰ</i> 60 ⁶	5 nom. <i>παρὰ</i> 20=4 nom. 4 ker.	33 ¹ / ₃
32, 412, 508	Πέτρος γεωργὸς Ἰωάνου καὶ Μαρίας in Telbonthis	13 nom. <i>παρὰ</i> 52	4 ¹ / ₃ nom. <i>παρὰ</i> 17 ¹ / ₃ =3 nom. 14 ² / ₃ ker.	33 ¹ / ₃
31, 411, 506	Ἰσάκιος γεωργὸς Ὀνοφρίου in Telbonthis	11 nom. <i>παρὰ</i> 44	3 ² / ₃ nom. <i>παρὰ</i> 14 ² / ₃ =3 nom. 11 ¹ / ₃ ker.	33 ¹ / ₃
426, 512	γεώργιον Ἰσιδώρου	3 nom. <i>παρὰ</i> 18	1 nom. <i>παρὰ</i> 6=0 nom. 18 ker.	33 ¹ / ₃
22, 269, 381	Island in the East of Thalmoon	1 nom. <i>παρὰ</i> 6	0 nom. 6 ker.	33 ¹ / ₃
267, 380	γεώργιον νήσου Θαλμόνυ	7 nom. <i>παρὰ</i> 35 ⁷	2 nom. <i>παρὰ</i> 3 ³ / ₄ =1 nom. 20 ¹ / ₄ ker.	33 ¹ / ₃
425, 510	γεώργιον Ὀφέως	13 nom. <i>παρὰ</i> 6	4 nom. <i>παρὰ</i> 2=3 nom. 22 ker.	30.72
		407 ² / ₃ art. wheat at 1 ¹ / ₂ ker.	24 nom. 17 ¹ / ₂ ker.	}
		33 ¹ / ₂ art. barley at 1 ¹ / ₃ ker.	25 nom. 11 ¹ / ₂ ker.	
			1 nom. 16 ¹ / ₄ ker.	
		Total	51 nom. 21 ¹ / ₃ ker.	

¹ See, e.g., ll. 161, 439.

² So read l. 488 instead of 57 art.

³ So read l. 515 instead of 6 nom.

⁴ In the quota the *γεώργιον Λουσιμάχου* at Kenembaton figures as debtor, while among the disbursements it is the *γεωργὸς Ἠλίας* at Kenembaton. There can, however, be no doubt that the two entries have reference to one another, seeing that all the other debtors in kind of the *πρόσοδος*, under which the entries in question fall, have their rebate stated elsewhere, except the vintagers of Kenembaton, who, however, only pay 3 art. barley, and so can have no connexion with a rebate of 29¹/₆ art. wheat. The sum due is 80 art. wheat, the rebate granted is on 87¹/₂ art. That is curious. If l. 61 were completely preserved, an explanation might be got from it and l. 165, but this is of course quite uncertain.

⁵ The amount estimated is 90 art. wheat. Since the compensation is allowed only on 80 art. presumably a portion of the lands in question was not affected by the *ἀβροχία*.

⁶ Original amount due 18 nom. *παρὰ* 72, l. 463, annual rebate of 3 nom. *παρὰ* 12, as above established, remaining annual debt 15 nom. *παρὰ* 60, on which sum according to l. 507 the rebate was allowed. The figures show that l. 507 has reference to l. 410, although in l. 410 the debtor appears as *Παπνούθιος γεωργὸς τοπίου Κάστορος* and in l. 507 the rebate is granted to *Ἀβράμ γεωργὸς Τελβώνθως* as receiver of rebate. That the *τόπιον Κάστορος* was situated at Telbonthis is attested also by ll. 463, 465.

⁷ It is not certain that l. 380 has reference to l. 267, but this is very probable; 2 nom. *παρὰ* 3³/₄ is in fact exactly ¹/₃ of 7 nom. *παρὰ* 35.

It is most remarkable that the same rate of relief obtains for money as for kind in the case of those debtors who receive rebate on both counts, namely the *γεωργία Πανίτ* and *ἐν Συμβίχει* and the heirs of Sarapion, the first at a rate of 50%, the last two of 33 $\frac{1}{3}$ %. From this we may conclude that prices of produce did not rise in spite of the *ἀβροχία*, otherwise the percentage of rebate allowed on money would not have been the same as on produce.

Among the disbursements those for irrigation claim considerable amounts¹, running in the 8th ind. to 10 nom. 11 $\frac{3}{4}$ ker.² For the 9th ind. the total cannot be ascertained³; in the 10th ind. 14 nom. 18 ker.⁴ and in the 11th ind. 5 nom. 4 $\frac{1}{2}$ ker.⁵ are expended on irrigation, comparatively little therefore in the year of the *ἀβροχία*, from which we may conclude that it was not possible to repair its consequences by artificial irrigation. Our document shows also the hiring of parts of the *sakkiyah*⁶ as in P. Bas. Cop. 1 (likewise from the Hermopolite district and of late date); among parts of the *sakkiyah* mention is made *inter alia* of *τύμπανα*, *κυκλάδες*, *ἄξωνες*⁷. *ἔχυσις* (ll. 124, 136, 219, 391) is no doubt to be corrected to *ἔκχυσις*, which apparently means a bucket; see BELL-CRUM, *Aegyptus*, VI, 207. Our document shows that the provision and upkeep of the irrigation machines in the case of the present estate also were the business of the landlord, as we know from various Oxyrhynchus papyri of the 5th and 6th cent. was the case for the Apion family (*e.g.*, P. Oxy. I, 137: XVI, 1982) and other landowners (P. Oxy. XVI, 1899, 1900).

Very important are the disbursements for new development and improvements. The amounts are:

	8th ind.	9th ind.	10th ind.	11th ind.
For new development and reed beds	8 nom. 13 $\frac{1}{4}$ ker. ⁸	1 nom. 17 $\frac{1}{2}$ ker. ¹²	2 nom. $\frac{1}{2}$ ker. ¹⁷	— nom. 6 $\frac{1}{2}$ ker. ²²
For buildings	2 nom. ⁹	3 nom. 11 ker. ¹³	3 nom. 16 $\frac{1}{2}$ ker. ¹⁸	—
For vats	11 nom. 3 $\frac{1}{4}$ ker. ¹⁰	9 nom. 4 ker. ¹⁴	9 nom. 15 $\frac{1}{2}$ ker. ¹⁹	8 nom. 14 ker. ²³
For reeds	—	9 nom. ¹⁵	16 nom. ²⁰	24 nom. 3 ker. ²⁴
Various	— nom. 12 ker. ¹⁴	— nom. 6 ker. ¹⁶	4 nom. 6 ker. ²¹	— nom. 18 ker. ²⁵
Total	22 nom. 4 $\frac{1}{2}$ ker.	23 nom. 14 $\frac{1}{4}$ ker.	35 nom. 14 $\frac{1}{2}$ ker.	33 nom. 17 $\frac{1}{2}$ ker.

¹ In what follows the artaba of wheat is throughout reckoned at 1 $\frac{1}{2}$ ker., barley at 1 $\frac{1}{4}$ ker. The sums cast in *παρὰ* form are converted into standard nomismata at the rate of 24 ker., while fractions of a keration lower than $\frac{1}{4}$ are disregarded as in the document itself.

² ll. 124-5; 127-9; 131, 134; 136-9.

³ ll. 219, 222, 224-6, 228 produce 2 nom. 22 $\frac{1}{2}$ ker. The figures, however, are lacking for ll. 215, 216. The former concerns the erection of a dam.

⁴ ll. 33; 336-8; 457-8; 460; 464-6: l. 460 no doubt *δεξιμεν(ῆς)* rather than *Δεξιμεν(οῦ)*.

⁵ ll. 385-9; 502. ⁶ *E.g.*, l. 125 where I would supply *τυμπ(άνου)*, not *τυμπ ανιστοῦ*, ll. 127-8.

⁷ (*cf.* WILCKEN, *Achic*, VIII, 92 and note 1.

⁸ ll. 57, 60, 98, 118-9. In l. 57 it is uncertain whether wheat or barley is meant. In the calculation I have arbitrarily assumed the former. In the case of the advance payments, ll. 118-9, I have assumed expenditure for new development, although such is expressly stated only at l. 119.

⁹ ll. 123, 126, 133.

¹⁰ ll. 115-6.

¹¹ ll. 107 (allowance for a *γεωργία*, details are lacking) and 130: *μισθός σκυνκίτ(ης)* for the oil-mill. Is that perhaps the *χοινκίς*, the crushing machine (*cf.* REIL, *Gewerbe*, 139) of the oil-mill? Its hire amounts here to 6 ker.; l. 220 its *τιμή* to the same, yet here, too, more likely we have to do with hire; for in l. 329 (10th ind.) the *τιμή σκυνκίτ(ης)* *Θαλμούβ β* costs 18 ker. Whether we are dealing here with two machines is not clear from the text as it stands. In the 11th ind. the item no longer appears. If ll. 130 and 220 deal with the hire of a crushing machine, it is questionable if these items should be reckoned among the improvements.

For foot-notes 12-25 see next page.

In the case of improvements the reference is mostly to new plantations of vineyards in the lands of Thalmoon and Kenembaton. The reeds required for supporting the vines are purchased in large quantities, and the *coloni* are also induced by bonuses to cultivate reeds. Vats are prepared; l. 313 shows that the production of vats for 61 arourae of vineyards cost 8 nom. 15 ker. On this creation of vineyards considerable sums are expended. Most of the *νεόφυτα* were doubtless such plantations of vineyards or reed-beds. Whether cornland was converted to vineyards or *χέρσος* was brought under cultivation for vines cannot be ascertained from our document, neither does it appear whether wine was grown on the estate even before the four years covered by our papyrus. We find, it is true, in the 9th ind. (l. 227) 18 ker. reckoned “*εἰς μεταφορὰν οἴνου Θαλμοῦ*” and 6 ker. in the 10th ind. for “*ναύλου οἴνου Θαλμού,*” but whether that means wine grown in Thalmoon and transported thence or perhaps wine imported for consumption cannot be determined. Wine does not figure in the account in any part of P. Bad. 95 (it is true the beginning and end of the papyrus have not survived). Here we must observe that the rent for vineyards in *all* the leases of the later period preserved to us is paid in wine or must. In the main, in our document at least, we must be dealing with new plantations of vineyards, since the figures in ll. 227 and 330 are very low in proportion to the large expenditure for reeds. Apart from this, it may here be remarked, no conclusions can be drawn from our papyrus about agricultural practice except that much more wheat was grown than barley. That oil-producing crops were also cultivated is made probable by the presence of the leased oil-mill in Thalmoon. The entry in l. 328 [*ἀγρο(άφω)ν τιμ(ῆς) ν[αύλ(ου) τοῦ ἐλαί(ου)*] Θ[*α*]λμού(ν) προ(μίσματα) α π(αρά) ε no doubt refers to oil produced in this mill from crops grown in and around Thalmoon, purchased by the estate management and conveyed to properties lying outside Thalmoon. The purchase of oil by the management can be established by various pieces of evidence (*cf.* ll. 379, 503).

It is a striking fact that our document also includes expenses for wages and for slaves although we hear nothing about personal exploitation by the owners. Whether the hired labourers were all of free status is not evident, and, in view of l. 316, “*Θεοφόβη παιδί,*” by no means certain; but here *παῖς* does not necessarily mean a slave. How slaves and workmen were employed can be seen only in the case of three workmen when *σιλοφόροι* (porters, *cf.* WILCKEN, *Archiv*, VIII, 92) are in question. Still one can doubtless assume that workmen and slaves had to assist in the course of improvements. In the case of slaves personal service of the master is a possible explanation.

¹² ll. 161, 163, 165, 176, 203.

¹³ ll. 214, 221, 223, 238. In l. 214 the number is incomplete.

¹⁴ ll. 235–6.

¹⁵ In ll. 233–4, I would, as in ll. 372–3, 456, 511, resolve not into *καλαμ(ας)* but into *καλάμ(ων)*, which is found in full in ll. 312, 315, 369, 371.

¹⁶ l. 220.

¹⁷ ll. 281, 332, 439, 450, 461–2.

¹⁸ ll. 294, 323, 325, 334, 459. The last item really belongs to the *δωρεά* but has strayed into the account of the *πρόσοδος*.

¹⁹ ll. 313–14, 326.

²⁰ ll. 312, 315, 456.

²¹ ll. 329, 331. The latter entry deals with road-making; *cf.* WILCKEN, *Archiv*, VIII, 92.

²² ll. 347, 480, 490.

²³ ll. 370, 374.

²⁴ ll. 369, 371–3, 511.

²⁵ l. 384; the reference is to grubbing up sedges.

Amount of expenses:

	8th ind.	9th ind.	10th ind.	11th ind.
Hired labour	— nom. 12 ker. ¹	—	5 nom. 4 ker. ⁴	5 nom. 22½ ker. ⁶
Slave labour	15 nom. ½ ker. ²	15 nom. 13 ker. ³	13 nom. 1 ker. ⁵	14 nom. 14½ ker. ⁷
Total for labour	15 nom. 12½ ker.	15 nom. 13 ker.	18 nom. 5 ker.	20 nom. 13½ ker.

The paid labourers receive as wages corn and money, the slaves corn and clothing, both receive oil as well in the 11th ind.

Lastly we may mention also among disbursements the payments to the private account of the proprietress in the 8th and 9th ind. In the 9th ind. only a few items enter into the question, withdrawals of cash to the total amount of 23 nom. 20 ker., and a payment of 4 ker. for *λιβάριον τῆς κύρας*⁸, in all, therefore, 24 nom. It is true, we cannot be certain in every case whether the disbursement is made for private account or for the estate. Still more difficult is the determination in the 8th ind. Still the cash withdrawals of the mistress, the corn delivery for her bread, the goods in kind delivered “*εἰς οἶκον*,” as well as the payments to a needleworker and a linen merchant, may be regarded as disbursements for her private account. They reach the total of 16 nom. 8¼ ker.⁹

The facts established up to date yield the following total picture for the management of the complete estate:

	8th ind.		9th ind.	
	Nom.	Ker.	Nom.	Ker.
<i>Receipts</i>				
Art. wheat	1010½	= 63. 4	1002½	= 62. 15½
Art. barley	109½	= 5. 11½	109½	= 5. 11½
Cash		175. 6		222. 16
Total due		243. 21½		290. 19
Annual deficit		13. 18		13. 18
<i>ἀβροχία</i>		—		—
ACTUAL RECEIPTS		230. 3½		277. 1
<i>Disbursements</i>				
Art. wheat	l. 80	743 = 46. 10½	l. 185	580 = 36. 6
Art. barley	l. 81	97½ = 4. 21	l. 186	108½ = 5. 19
Cash	ll. 144-52	107. 8¼	ll. 248, 253	123. 4
Total		158. 16¼		164. 29
Deficit reckoned above and <i>ἀβροχία</i>		13. 18		13. 18
Balance		144. 22¼		151. 2
Private account		16. 8¼		24
Total Expenses		128. 14 = 55. 88		127. 2 = 45. 87
Net product		101. 13½ = 44. 12		149. 23 = 54. 13

¹ l. 66.

² ll. 74, 75 and 108 give an expenditure of 10 nom. 23 ker. Since, however, the figure for l. 62 is missing owing to a lacuna, the number for the 8th ind. cannot be accurately fixed. Now the corn provision for the slaves demands 112 art. wheat in the 9th ind., 82 art. wheat and 27½ barley in the 10th ind., 76½ art. wheat and 32½ barley in the 11th ind. For the 8th ind. 45 art. barley is reckoned (ll. 74-5), and no great mistake can be committed in assuming that the number lacking in l. 62 amounts *more or less* to 65 art. wheat. I have accordingly inserted the missing figure in my calculation.

³ ll. 160, 208.

⁴ ll. 284-93, 295, 316-22.

⁵ ll. 440, 468.

⁶ ll. 350-8, 375-9.

⁷ ll. 482 (where supply [τῶν πα]ιδ(ων)), 503-4.

⁸ ll. 239, 240, 217. In the last the fraction of a keration is doubtless lost in a lacuna.

⁹ ll. 64, 68, 72, 77-8, 103-4, 120-1.

<i>Incidence of expenses</i>	Nom. Ker.	8th ind.			Nom. Ker.	9th ind.		
		Percentage of				Percentage of		
		Actual receipts	Net product	Costs		Actual receipts	Net product	Costs
Taxes	?			38.16 $\frac{1}{4}$	13.96	25.79	27.15	
Irrigation	10.11 $\frac{1}{4}$	4.56	10.34	8.17	?			
Improvements	22. 4 $\frac{1}{2}$	9.63	21.83	17.24	23.14 $\frac{1}{4}$	8.53	15.76	
Labour	15.12 $\frac{1}{2}$?	6.74	15.26	12.05	15.13	5.61	10.36	
<hr/>								
		10th ind.					11th ind.	
<i>Receipts</i>		Nom. Ker.					Nom. Ker.	
Art. wheat		1010 $\frac{2}{3}$ = 63. 4				1010 $\frac{2}{3}$ = 63. 4		
Art. barley		109 $\frac{1}{2}$ = 5.11 $\frac{1}{2}$				109 $\frac{1}{2}$ = 5.11 $\frac{1}{2}$		
Cash		222.16				222.16		
Total due		291. 7 $\frac{1}{2}$				291. 7 $\frac{1}{2}$		
Annual deficit		13.18				13.18		
<i>ἀβροχία</i>		—					277.13 $\frac{1}{2}$	
ACTUAL RECEIPTS		277.13 $\frac{1}{2}$					51.21 $\frac{1}{4}$ = 18.69 %	
<i>Disbursements</i>							225.16 $\frac{1}{4}$	
Art. wheat	ll. 296,442	468 = 29. 6			ll. 362,491	857 $\frac{2}{3}$ = 53.14 $\frac{1}{2}$		
Art. barley	ll. 297,443	42 = 2. 2 $\frac{1}{2}$			ll. 363,492	80 $\frac{1}{2}$ = 4. 1 $\frac{1}{2}$		
Cash		103.22 $\frac{1}{4}$			ll. 394,516-9	121. 3 $\frac{1}{4}$		
Total		135. 6 $\frac{1}{4}$				178.18 $\frac{1}{4}$		
Deficit reckoned above and <i>ἀβροχία</i>		13.18				65.15 $\frac{1}{4}$		
Balance		121.12 $\frac{1}{4}$				113. 3		
Private account		—				—		
Total expenses		121.12 $\frac{1}{4}$ = 43.79 %	} of the actual receipts			113. 3 = 50.13 %	} of the actual receipts	
Net product		156. 3 = 56.21 %				112.13 $\frac{1}{4}$ = 49.87 %		

<i>Incidence of expenses</i>	Nom. Ker.	Percentage of			Nom. Ker.	Percentage of		
		Percentage of				Percentage of		
		Actual receipts	Net product	Costs		Actual receipts	Net product	Costs
Taxes	38.16 $\frac{1}{4}$	13.93	24.79	31.81	38.16 $\frac{1}{4}$	17.13	34.36	34.18
Irrigation	14.18	5.31	9.45	12.14	5. 4 $\frac{1}{2}$	2.30	4.61	4.59
Improvements	35.14 $\frac{1}{2}$	12.82	22.81	29.27	33.17 $\frac{1}{2}$	14.94	29.95	29.80
Labour	18. 5	6.56	11.67	14.98	20.13 $\frac{1}{2}$	9.11	18.27	18.18

Note in this schedule that the addition of the *γεώργιον του Ὀνιανίσκου* had a favourable influence on the total product, to which also the fact contributed that it proved possible, despite the addition of this estate, to keep the total expenses permanently lower in the 9th–11th ind. than the figure for the 8th ind. Whereas in the 8th ind. 55.88 % of the actual receipts is swallowed up by expenses and only 44.12 % remains as net product, the proportion for the 9th and 10th ind. is practically inverted, 45.87 % and 43.79 % expenses as against 54.13 % and 56.21 % net product. And even in the 11th ind., when the *ἀβροχία* diminishes the regular receipts by 18.69 %, 50.13 % of the actual receipts goes for expenses while 49.87 % forms the net product, thus achieving a more favourable percentage proportion than in the 8th ind. Naturally savings had to be effected in the

11th ind. to reach that result, and so no sort of disbursements are made in this year for plantations, which as already observed were particularly low in the 11th ind. for irrigation purposes, but disbursements for improvements are on the whole continued on a lavish scale despite the *ἀβροχία*, and surpass in total the parallel figures for the 8th and 9th ind. (that *may* be connected with the change of owner), lagging behind the figure for the 10th ind. only by the sum of 1 nom. 20½ ker. Indeed, for vats and reeds the *ἀβροχία*-stricken 11th ind. provides, with a total of 32 nom. 17 ker., the highest figure for the whole four years. Parallel with the disbursements for improvements, labour expenses also mount up, reaching their highest figure in the 11th ind., the year of the *ἀβροχία*, when they account for 18·18% of the total costs, 9·11% of the actual receipts, 18·27% of the net product, a very large figure considering that we are not dealing with personal exploitation by the owners, and so not with the regular agricultural operations. Finally, the taxes are *very high*, amounting in the 9th ind. to 25·79% of the net product; in the 10th ind. to 24·79% of the net product; and since the state allowed no tax alleviation for *ἀβροχία* (unlike what we know from the Roman period) the taxes reach in the 11th ind. the height of 34·36% of the net product. So it appears that even the great landowners and the great nobles (three *comites* are involved) had to submit in this period of decline to pay very great sums to the state.

While papyri already published have revealed to us much that is ugly about the great nobles of the period of decline, we can assert, on the other side, that the *comites* of our document managed their estate with great wisdom and great humanity. They spent a great part of their revenues in improvements (even the expenses for irrigation must partly be claimed as such), and in one year, when an accident of nature severely damaged the produce of their estates, they remitted to the stricken tenants 30·72–100%¹, usually 33½% of their liabilities, although themselves allowed by the state no tax alleviation whatever in consequence¹.

¹ It may be further noted, on the text:

l. 20 should probably be restored [π ἀρὰ, τοπίου Φοιζάμμωνος γ]ε[ωργίου, θαλμούου] νομίσματα, δ l. ζ, π(ἀρὰ) λε. Cf. l. 267, δ probably a *lupus calami* for the mere reason that in sums of money with π(ἀρὰ) seldom if ever more is subtracted than in keratia one-third of the previous nomismata

l. 23: instead of π(ἀρὰ) ζ l. π(ἀρὰ) κ, cf. l. 270.

l. 36: Σαρα[πίωνος] ὑπ' ἐρ κριθῶν, cf. l. 415.

l. 45: [π' ἀρὰ] Μηνᾶς [καὶ Πακλίου ἀπὸ Θύνεω]ς, cf. l. 424.

l. 46: [π' ἀρὰ] Παπνουθίου γεωργὸν ἀπὸ Ὀφείως νομίσματα γ π ἀρὰ, 5], cf. l. 425.

l. 47: [π(ἀρὰ) τῶν γεωργῶν ἀπὸ Ἰσιδῶρου] νομίσματα γ π ἀρὰ ιε], cf. l. 426.

l. 48: [π(ἀρὰ) Ἀμμωνίου γεωργῶν], etc., νομίσματα η [π ἀρὰ λβ], cf. l. 427.

l. 49: [π(ἀρὰ) Ἐνοίκτυρος, ἀρνη]στρόφω, cf. l. 428.

These figures and the above proposed alteration in the number of nomismata in l. 30 from 28 to 18 give exactly the total of l. 54.

AN IVORY SPHINX FROM ABYDOS

(British Museum, No. 54678)

BY JOHN GARSTANG

With Plate vii.

During the course of excavations made in 1908 in the necropolis of Abydos there was found a small ivory object designed like the head of a royal sphinx, which between its fore paws clutches a struggling human victim. This object was originally assigned to the collection of the late Rt. Hon. Russell Rea, M.P., and after his death was given, by his widow, to the British Museum, together with other objects from his collection. Artistically of considerable excellence it is possibly also of historical consequence. From its provenance it seems clearly to belong to the period of the late Middle Kingdom, and Dr. Hall has proposed to recognize in it a Hyksos king, possibly Khian, worrying, imperturbably and implacably, a struggling Egyptian. Dr. Hall's views are all the more valuable in that they are independent of the circumstances of discovery, which tend to the same conclusion as regards the date. He bases his opinion on the character of the royal portrait, which he regards definitely as Syrian and Semitic. This is well seen in the profile. He fails to recognize in it any known royal head of the Twelfth or Thirteenth Dynasty, the kings of which on the other hand are known to have been typically Egyptian without trace of Semitic blood.

On account of the obvious interest of the sphinx, this brief note is published to explain the circumstances of its discovery. The object seems to have formed the handle to an ivory box, being pierced with peg-holes and appropriately shaped on its under-side. It was found in a tomb numbered 477. This was one of a uniform series which, though broken and disturbed, was sufficiently preserved to enable the contents of the adjoining tombs to be separated. They all contained the same class of objects, among which the shape and material of beads and scarabs were the most distinctive, suggesting in themselves a date not far removed from the Twelfth Dynasty, but with sufficient variation to leave the precise date open. In the immediate vicinity, the discovery of "pan" pottery and other remains indicated the Hyksos period more definitely, and this appears in the following relevant extract from a monthly report addressed to the Excavation Committee on January 30th, 1908, from Abydos.

The grouping of objects in the tombs has proved of some special interest....We have also added to our fund of material bearing on the misty "Hyk-sos" period, and have lately come across a number of tombs containing fine specimens, in a few cases whole and unbroken, of the curious "pan" pottery, which seems to be a survival (or at any rate revival) of the predynastic art. We found traces of this in former years at Esnah and in Nubia, and I have made a note of it in the *Ann. Serv.* (VIII, 132 ff.)....The best piece is unquestionably the small sphinx in ivory, which is the finest example of Egyptian carving that I have ever had the luck to find....Some few objects have been found too recently to be incorporated in this report, e.g., a fine porphyry vase, a stone figure, a model of a house, etc....



Ivory sphinx of Hyksos date from Abydos. British Museum, No. 54,678.

Scale about 1½ times natural size.

The groups of "pan" pottery mentioned have been published with illustrations under the title *Two Nubian Graves of the Middle Kingdom at Abydos* in *Liverpool Annals*, x, 33, with Plates vii and viii, by Mr. W. B. Emery, who regards the pottery in the graves as of Nubian origin. While there is no doubt of its Nubian affinities, fragments of this class of ware have been found as far afield as Sakje-Geuzi in North Syria, in a provenance of the same period; moreover the large alabaster vessel associated with the deposit is comparable with a similar object of the Middle Bronze Age (*i.e.*, the Hyksos period) discovered in 1925 at Jaffa in Palestine, and published in *Bulletin* No. 2 of the Palestine Museum (Pl. ii, No. 4944). There is evidently more to be learnt about the ramifications of these types.

The following is a copy of the inventory cards of the tomb in question, No. 177, and its neighbours, as recorded at the time.

TOMB 476. MARK A 798.

Inventory.

- (a) Kohl vase with top and lid. Limestone. 4 cms.
- (b) Kohl vase with top and lid. Dark stone. 4.7 cms.
- (c) A few beads of gold.
- (d) Two small beads of emerald: 10 mm. }
- (e) Two small beads of lapis lazuli: 12 mm. }
- (f) One small bead of lapis lazuli: 15 mm. - Threaded.
- (g) One small bead of gold: 13 mm.
- (h) Curious piece of metal, heavy: 30 mm. }
- (i) Small ball beads of carnelian and glaze.
- (j) One long cylindrical bead (65 mm.) and one ball bead.

TOMB 477. MARK A 08.

Inventory.

- (a) Scarab of lapis lazuli, inscribed, in fine gold setting: 2.5 cms.
- (b) One amethyst bead.
- (c) Two scarab-form beads of stone.
- (d) One small scarab of red stone: 8 mm.
- (e) Plaster eye with gold foil.
- (f) Curious daisy-like bead.
- (g) Ivory sphinx clutching victim: 59 mm. long, 24 mm. high.

TOMB 478. MARK A 08.

Inventory.

- (a) Tubular glazed beads, black and blue, from collar.
- (b) A ball bead.
- (c) Piece of shell.
- (d) One small bead with ribs, blue glaze.
- (e) Three fragments of a large vase.

WHO SUCCEEDED RAMESSES IX-NEFERKERĒR ?

BY GIUSEPPE BOTTI

A prolonged study of the Turin fragments of the Twentieth Dynasty Diary of the Theban Necropolis, more particularly the portions belonging to the 13th and 17th years of Ramesses IX-Nefkerēr and the 3rd year of Ramesses X-Khepermarēr¹, has led me to some conclusions which may not be without interest for the history of this difficult period. They bear chiefly on the length of the reign of Nefkerēr, the identity of his successor and the position of the period known as the *whm mšwt* or Renaissance.

It has frequently been stated that the reign of Nefkerēr was immediately succeeded by the mysterious epoch known as the *whm mšwt*, Years 1, 2 and 6 of which have long been known to us, while Years 4 and 5 also occur in an unpublished papyrus (Cat. 1903) in the Turin Museum. Many writers² have assigned all the documents dated in this era to the reign of Khepermarēr, the generally accepted successor of Nefkerēr. The facts on which this attribution is based are as follows:

1. On the verso of Papyrus Abbott are three lists of thieves bearing the date "Year 1 corresponding to Year 19." This Year 1 is certainly that of the Renaissance, since the thieves in the lists are actually tried in Years 1 and 2 of that epoch (Pap. Mayer A, Pap. Brit. Mus. 10052 and 10403). The Year 19 to which it corresponds has been ascribed to the reign of Nefkerēr solely because it stands on the verso of a papyrus whose recto is dated in his reign.

2. MASPERO (*Les momies royales*, 658) quotes an unpublished papyrus of the Turin Museum containing the accounts of three fishermen, in which, in a running series of dates, the regnal year changes from 1 to 19 between the 27th day of the fourth month of inundation (ro. 1.7) and the last day of the first month of winter (ro. 1.11³). Relying on the combination of these two years 19 and 1 in very similar circumstances on the verso of Pap. Abbott, Maspero assigns Years 19 and 1 of the fishermen's account-papyrus to the reigns of Nefkerēr and Khepermarēr respectively.

¹ See *I papiri irratici del Museo di Torino*, I (=BOTTI-PEET, *Il Giornale della Necropoli di Tebe*, fasc. 1-3). The last of the three papyri mentioned is that known as Pap. Chabas-Lieblein No. 1.

² *E.g.*, GAUTHIER, *Livre des rois*, III, 1, 216-7; PETRIE, *History*, III, 185.

³ Fresh fragments have lately been added by me to this papyrus (Cat. 2075) and I have collated the whole with the utmost care. It must be noted that between the two dates referred to by Maspero stands another (passed over by him) in front of recto 1.9, namely day 13 of the first month of winter. It might be thought that this date is to be attributed to Year 1, not to Year 19, the scribe having inserted it later without noticing that, being the first date in a fresh year, it ought to be accompanied by the year number. That this is not the case is clear from the new fragments, which enable the change of year to be more closely determined than it was by Maspero. In fact it is clear from vs. 1.8-9 that the change occurred between day 17 of the first month of winter (Year 19) and day 27 of the same month (Year 1). In line 7 of the same page there actually appears to stand the date day 24 of this same month, but close examination reveals the fact that the first \supset of the figure 20 has been crossed out in faint black ink, and the date is consequently to be read 14, and does not affect the question here under discussion.

It is apparent that these conclusions do not rest on a firm basis of reasoning but are a matter of hypothesis. If I am not mistaken, however, the new material put together from fragments in Turin and the certainty with regard to the date of Pap. Chabas-Lieblein No. 1 which a closer examination of the papyrus and its contents have enabled us to reach¹, make it possible to remove these conclusions from the region of hypothesis and to place them on a secure basis. Let us therefore examine them a little more in detail.

With regard to the lists on the verso of Pap. Abbott the attribution of their Year 1 to the Renaissance on the grounds that the trial of the thieves actually took place in that and the following years may be taken as certain, and provides us with a fixed point from which to set out. On the other hand the mere fact that these lists occur on the verso of a papyrus dated in Year 16 of NeferkerĒ is not in itself sufficient to assign their date of Year 19 to the same reign, though a study of the manner in which papyrus, apparently somewhat of a rarity, was used and re-used by the necropolis scribes leads me to believe that additions made to a papyrus are in general very little later in date than the original contents. There are, however, other grounds for believing that the Year 19 is that of NeferkerĒ, and they are to be found in two new papyri which I have succeeded in putting together from the fragments in Turin.

The first of these (Cat. 1914-2053/49.50-2028), a fragment of which was published by Pleyte-Rossi in their Pl. lxxv a (*cf.* GAUTHIER, *Livre des rois*, III, fasc. 1, 218), bears on its recto a list of 14 workmen, and on its verso a text of a descriptive or narrative nature, unfortunately incomplete. That recto and verso are not to be ascribed to the same reign is clear both from their contents and from the diversity of their script. The recto bears neither date nor king-name, but of the 14 workmen six are well known from the Necropolis Diary for Year 17 of NeferkerĒ, namely Khons son of Ipu (l. 3 = 17 A ro., 2.2), Userhatmer son of Maanehktef (l. 4 = 17 A ro., 2.5 and 17 B vs., 5.43), Kenna son of Hornefer (l. 5 = 17 A ro., 2.6 and 17 B vs., 5.42), Iernutef son of Ka..... (l. 6 = 17 A ro., 2.7; 17 B vs., 5.44, without the father's name), Kedakhtef son of Amenkhau (l. 7 = 17 A ro., 2.8; 17 B vs., 5.45, without the father's name) and Amenhotpe son of Kenna (l. 10 = 17 B vs., 5.46). Taking into account the further fact that the script of the recto is identical with that already known from papyri of the reign of NeferkerĒ it seems reasonable to assign the recto of the papyrus to that king.

The verso, written in a cursive script, leaves us in no doubt as to its date, for the two cartouche-names of a king each occur twice, and though in each case one of them is damaged the two occurrences together enable us to restore the full names "King of Upper and Lower Egypt, Lord of the Two Lands, KhepermarĒ-SetpenrĒ" and "Son of RĒ Ramesses-Amenherkhepeshef."

The papyrus thus provides us with a new piece of evidence to be added to that of the Necropolis Diary for Year 17 and to Pap. Chabas-Lieblein No. 1 for placing NeferkerĒ and KhepermarĒ very close together in time, for it is highly probable, judging by what we know of the method of using papyrus in the necropolis, that our roll was re-employed immediately after the reign of NeferkerĒ and not after a considerable interval.

The other new papyrus bears on its recto two pages. That which stands on the right (Cat. 1939) contains six lines whose beginnings are lost, written in large characters. It is dated "Year 2, third month of inundation, day 19, under the majesty of the King of Upper and Lower Egypt [KhepermarĒ]-SetpenrĒ. Son of RĒ Ramesses-Amenher-

¹ BOTTI-PEET, *op. cit.*, fasc. 3.

khepeshef. The restoration [Khepermarēꜥ] is clearly certain, for no other Ramesside combines the addition Setpenrēꜥ in his first name with Amenherkhepeshef in his second. The page on the left (Cat. 1932) contains accounts whose nature does not here concern us. It gives us two dates "Year 19, third month of inundation, day 7" (l. 1) and "Year 19, fourth month of inundation, day 9" (l. 7). A third date in l. 9 is lost except for the year, which is again 19.

The verso bears two pages, of which that on the right is dated in the reign of Khepermarēꜥ (the first cartouche is lost but the second, Ramesses-Amenherkhepeshef, is complete). The year- and month-dates have unfortunately perished. The position is therefore as follows. We have a papyrus of which the right-hand page of the recto and the whole of the verso are dated to Khepermarēꜥ, while the left-hand page of the recto is dated in Year 19 of a king unnamed. The explanation is not difficult to find, for the large script of the right-hand page of the recto marks it out as a true and proper title-docket, written in the characters usual for such a purpose, and inserted, owing to the customary mania or necessity for saving papyrus, on a papyrus which had already been used. This title served to fit the roll to be used for the registration of events in a new reign, as is clear from the contents of the verso. It was inserted either by gumming over the old papyrus a fresh strip (an irregularity in the fibres in the two bottom lines on the left suggests this possibility) or by using a space left unwritten by the accountant of Year 19, without taking the trouble to erase the accounts which stood on the left. To attribute this Year 19 to an epoch later than the page on its right is quite impossible, for we could only ascribe such a year to Menmarēꜥ (Ramesses XI); it would be very strange if among the papyri of that reign, all written in a highly cursive script (the publication of the Turin Papyri now in progress will demonstrate this fact), this one single example should exist which shows a script characteristic of the reign of Nefekerēꜥ, a script extremely similar indeed to that of Extract C of the Necropolis Diary of Year 17¹.

We are thus forced to admit the priority of the left-hand page of the recto over both the right-hand page and the verso to which this latter forms the title-docket, and our papyrus consequently falls into the same category as Pap. Abbott and Pap. Turin 2075, giving the following combinations:

- Year 19 corresponding to Year 1 (Abbott).
- Year 19 and Year 1 (Pap. Turin 2075).
- Year 19 and Year 2 (Pap. Turin 1932+1939).

Now since in the relation of dependence between the years above indicated the point of departure remains constant it is clear that the combination 19-1 cannot be accidental: and since we have in Pap. Turin 1932+1939 (though not in Pap. Abbott and Pap. Turin 2075) the name of the king who stands in direct relation with the point of departure it may safely be argued that this king can only be the successor of the king of Year 19. But this king is Khepermarēꜥ who, to judge by the evidence above quoted of Pap. Chabas Lieblein No. 1 and the Necropolis Diary of Year 17 of Nefekerēꜥ, is the successor of Nefekerēꜥ. Consequently the king of Year 19 is Nefekerēꜥ.

Maspero's supposition with regard to Pap. Turin 2075 thus acquires a definite value. What is more, now that the attribution of Pap. Chabas-Lieblein No. 1 to Khepermarēꜥ is assured, Pap. 2075 provides fresh elements which confirm the succession Nefekerēꜥ-Khepermarēꜥ.

The two pages of its recto deal with the accounts of three fishermen, Bekentha,

¹ BOTTI-PEET, *op. cit.*, fasc. 3.

Kasankh and Amenemopenakht. The first two are known from the Diary of Year 17, and both, together with Amenemopenakht, occur in Pap. Chabas-Lieblein. Two of the three thus continued to furnish fish to the necropolis throughout the period covered by these three papyri, and the absence of the third from the Diary of Year 17 may be due to nothing more than the fragmentary condition of that document.

In lines 10-15 of the second page of the recto of the papyrus a new handwriting appears, identical with that of Pap. Chabas-Lieblein No. 1. This again is a fact not to be ignored in determining the chronological relation of the two papyri.

On the verso are the accounts of three other fishermen for the same Years 19 and 1, Setekhmose, Ashatikht and Kadet. The first and the last occur both in the Diary of Year 17 and in Pap. Chabas-Lieblein: Ashatikht, like Amenemopenakht of the recto, is absent from the Diary of Year 17. Should fortune enable us to lay hands on some fragment of Year 2 of KhepermarĒ containing allusions to these fishermen the relation to one another of the papyri under discussion and likewise the order of the royal succession would be established beyond possibility of doubt, though from what has already been said it is clear that such further proof is almost superfluous.

The king of Year 19 then is NeferkerĒ-Rameses IX and the king of Year 1 is KhepermarĒ-Rameses X, and we thus obtain from the papyri we have examined the following succession of dates:

Diary of Year 17, NeferkerĒ.

Pap. Abbott, verso: Year 19 of NeferkerĒ, Year 1 of KhepermarĒ.

Pap. Turin 2075, recto and verso: Year 19 of NeferkerĒ, Years 1 and 2 of KhepermarĒ.

Pap. Turin 1932 and 1939: Year 19 of NeferkerĒ, Year 2 of KhepermarĒ.

Pap. Chabas-Lieblein No. 1: Year 3 of KhepermarĒ.

In this series no regnal year of KhepermarĒ is missing

There remains the problem of the mysterious Renaissance, which manifestly receives no fresh light from the two new documents which we have been discussing, and with regard to which we are consequently not prepared to give any opinion. For regarding it as immediately posterior to the reign of NeferkerĒ and consequently as identical with the reign of KhepermarĒ we have nothing but the combined evidence already indicated of Pap. Abbott, verso and Pap. Mayer A, Pap. Brit. Mus. 10052 and 10403, from which it is clear that thieves denounced in "Year 1 corresponding to Year 19" were brought to trial in Years 1 and 2 of the Renaissance. As for Year 2 the evidence of the new Turin Papyrus 1932+1939 with its mention of KhepermarĒ may quite easily be reconciled with that of the group of papyri just quoted by supposing that KhepermarĒ allowed two methods of dating in his reign. From Pap. Chabas-Lieblein No. 1, dated in Year 3 of KhepermarĒ, we learn nothing in this connexion, nor do the new Turin Papyrus 1903 and Papyrus Ambras of Vienna, both dated in the Renaissance, throw any further light on the matter. It would therefore seem unwise to exclude the possibility that the Renaissance may be subsequent to KhepermarĒ. It is possible that a solution may be reached when the immense material formed by the proper names of the Turin papyri has been put together and worked out. Even then the results arrived at may well be of the nature of probabilities rather than certainties.

THE CHRONOLOGICAL PROBLEMS OF THE TWENTIETH DYNASTY

BY T. ERIC PEET

The Twentieth Dynasty presents serious chronological problems which would have attracted far more attention than they have had this period belonged to a more brilliant epoch of Egyptian history instead of to the decadence. We know very roughly the number of years to be allotted to it, and we possess the names and monuments of a number of its kings. It is when these kings are to be placed in their chronological order and the lengths of their reigns fixed that difficulties begin. Some admirable work has been done on the subject, more particularly by Lepsius¹, Maspero² and Sethe³, but little has been added to their efforts during the last twenty years. This is mainly due to the fact that those who have dealt with the question will not observe that fundamental distinction between possibility or probability on the one hand and certainty on the other which must be the basis of any archaeological discussion. Once a single argument has been admitted which does not amount to a certainty, the whole chain of reasoning is vitiated. Thus we may read in more good books than one that Ramesses IX (Nefekerker̄) reigned at least 19 years, and that Herihor was the son of Isis, a daughter of Ramesses VI: yet both are pure conjectures. They may both be right, but neither can be proved.

The present article makes no pretence of solving once and for all the difficulties connected with this problem. It is merely an attempt to sum up the position as it stands, and its only claims to carry any weight are that it does clearly distinguish fact from theory and that it makes use of a certain number of unpublished documents in the British Museum and at Turin⁴.

It is unfortunate that Manetho's epitomizers have treated us very shabbily with regard to this dynasty, for they only give us the number of kings of whom it consisted, namely twelve, and the number of years which it lasted, 135 according to Africanus and 178 according to Eusebius. It is difficult to attribute any serious value to these figures, especially in view of their divergence. At the same time an examination of the reign-lengths actually known to us from contemporary monuments, together with the indications that some members of the dynasty were very ephemeral rulers, leads one to

¹ LEPSIUS, *Königsbuch*, Pls. XXXVII ff.

² MASPERO, *Les momies royales de Dér el-Bahari*, in *Mémoires de la Mission archéologique française au Caire*, tome premier, Paris, 1889.

³ SETHE, K., *Untersuchungen zur Geschichte und Altertumskunde Aegyptens*, Erstes Heft: *Die Prinzenliste von Medinet Habu*.

⁴ The utmost caution, however, is necessary in using these papyri for chronological purposes. Many of them have been used and re-used more than once, and the chronological order of the various entries is often exceedingly difficult to establish with certainty, even the generally accepted axiom that the recto is always filled before the verso seemingly having its exceptions. In the case of the Turin papyri, too, their fragmentary nature detracts considerably from their value as material. Were all the Turin papyri in perfect condition, we should be very well informed about the chronology of the late Twentieth Dynasty.

believe that an average of twelve or fifteen years for each king, as demanded by the Manethonian figures, is by no means an absurdity. Breasted, who works backward by dead reckoning from the Persian Conquest in 525 B.C., adding together the maximum year known for each king and making what appear to him reasonable adjustments in cases of doubt, finds room to allot about 110 years to the Twentieth Dynasty, namely 1200-1090 B.C. The divergence from the lower Manethonian figure is considerable and that from the higher so great as to throw serious doubt on the Eusebian tradition.

Let us then leave conjecture and later tradition both aside and ask what can be gathered from contemporary sources. The first king of the dynasty, Setnakht, hardly concerns our problem, and as some authorities assign him to the end of the previous dynasty we shall follow their example. This leaves us with a number of kings all of whom bore the name Ramesses. In the older histories they usually number ten, but Maspero¹ has given good reason for believing that the old Ramesses IX, who bore the names Sekhaenrē-Miamūn and Ramesses-Siptah, is identical with Akhenrē-Setpenrē Siptah-Meneptah of the Nineteenth Dynasty. This erasure leaves us with nine Ramesses, numbered from III to XI. We shall now take these in order, trying in each case to establish the length of the reign and the position in the dynasty. For the sake of convenience we shall adopt here and throughout the article the numbering given to these Ramesses by Gauthier in his *Livre des rois*, III, fasc. I, 151 ff.

Ramesses III

Usimarē-Miamūn

The length of the reign is certain from the Great Harris Papyrus, I, 1, whence it is clear that the king lived into his 32nd year².

Ramesses IV

Hekmarē-Setpenamūn

That this king was the successor of Ramesses III is clear from the concluding sentences of the Harris Papyrus. The length of his reign is also certain from a Turin papyrus, Pleyte-Rossi, li-lx (collated)³. It is six years⁴.

Ramesses V

Usimarē-Sekheperenrē

With this king we leave the region of certainty and embark upon that of conjecture. In the first place it is not certain that Sekheperenrē was the immediate successor of Hekmarē Ramesses IV. Our sole guide is the so-called List of Princes at Medīnat Habu. Some historians, Petrie for example, take this list to consist solely of ten sons of Ramesses III. According to these writers the list must have been made in the reign of Usimarē-Akhenamūn, Ramesses-Setherkhepeshef, our Ramesses VIII, who

¹ *Ann. Serv.*, x, 131-8.

² For discussions on the exact date see GAUTHIER, *Le Livre des rois d'Égypte*, III, fasc. I, 163, note 2, and authorities there quoted. The assignment to this reign of the Year 31 of Pap. Mallet, I, 3 seems very reasonable. That the Turin "Strike" Papyrus, Cat. 1880 = Pleyte-Rossi, xxxv-xxvii (collated), of Year 29 belongs to this reign is probable from its reference to the vizier Ta

³ MASPERO, *Les mondes royales*, 663; SPIEGELBERG, *Zeitschr. f. äg. Spr.*, xxix, 73; *Journal*, x, 119-120.

⁴ To the list of dated monuments given by Gauthier add now GARDINER-PLER, *Inscriptions of Sinaï*, Pl. lxxiv, No. 275 (Year 5).

is the fourth name and figure in the list and the last to have his name in the cartouche. This will become clearer if we examine the whole list.

There are in effect two lists, forming duplicates, except in a few details, the one of the other. They are on the west or back wall of the second court of Ramesses III's temple at Medinat Habu. List A runs northward from the central doorway and at the end of the wall turns the corner on to the north wall of the court. It contains eighteen male figures, each of the first ten of which is accompanied by a vertical column of inscription giving the titles and names of a prince (L., *D.*, III, 214 *a* and *b*). List B runs southward from the doorway, comprising on the west wall thirteen princes, and turns on to the south wall of the court, where there are thirteen princesses, all unnamed. Of the princes ten are named, just as in List A (L., *D.*, III, 214 *c*).

The names are as follows:

1. Ramesses (in cartouche). No further name.
2. Ramesses (not in cartouche) Nebmarēꜥ-Miamūn (in cartouche).
3. Ramesses-Amenherkhepeshef-Neterhekon¹ (in cartouche).
4. List A: Ramesses Setherkhepeshef (not in cartouche), King of Upper and Lower Egypt, Usimarēꜥ-Akhenamūn (in cartouche).
List B: Setherkhepeshef (not in cartouche), Son of Rēꜥ, Lord of Risings, Ramesses-Miamūn-Setherkhepeshef.
5. Praherwenemef.
6. Mentuherkhepeshef.
7. List A: Ramesses Meritum.
List B: Meritum.
8. Ramesses Khaemwēse.
9. Ramesses Amenherkhepeshef.
10. Ramesses Miamūn.

If we adopt Petrie's attitude towards this list it is not difficult to find in it the names of seven kings of the Twentieth Dynasty known from other sources, and they would occur in an order which does not clash seriously with any other evidence. Thus, leaving out the two princes 5 and 6, who possibly died young, and Meritum (No. 7) of whom as a king we have no reliable trace, we should get the following identifications:

1. = King Ramesses IV, Hekmarēꜥ.
2. = King Ramesses VI, Nebmarēꜥ.
3. = King Ramesses VII, Usimarēꜥ-Miamūn-Setpenrēꜥ, *i.e.*, Ramesses-Itamūn-Neterhekon.
4. = King Ramesses VIII, Usimarēꜥ-Akhenamūn.
8. = King Ramesses IX, Nefkerēꜥ-Setpenrēꜥ, Ramesses-Khaemwēse.
9. = King Ramesses X, Khepermarēꜥ-Setpenrēꜥ, Ramesses-Amenherkhepeshef.
10. = King Ramesses XI, Menmarēꜥ-Setpenptah, Ramesses-Khaemwēse-Miamūn-Neterhekon.

¹ Lepsius in one case (*D.*, III, 214 *a*) shows a damaged *t* before the words *Ntr hꜥꜥ ꜥꜥꜥ*, though in the other case (214 *c*) no such sign is indicated. A *t* would suggest an abbreviated writing of the word *it* 'father' and would combine with the Amūn to form *It-īmn*, a name of Ramesses VII, Usimarēꜥ-Setpenrēꜥ-Miamūn. Sethe therefore (*Unters.*, I, 60-61) prefers the reading without *t*, the more so as the figure of Amūn has in both cases the *khepeshef*-sword on its knee, indicating the reading *Imn-hꜥꜥ-hꜥꜥ* rather than *It-īmn*. Dr. Gardiner tells me that there certainly never was a *t* in the cartouche in List B and that what Lepsius shows as a damaged *t* in List A is in all probability a mere hole.

These identifications are in the main not unreasonable *a priori*, and we need for the moment only remark on the facts that the first is a pure guess, for in the List of Princes no name save Ramesses is here given, that Ramesses V, Usimarēc-Sekheperenrēc, is missing, and that the identification of No. 3 with Ramesses VII involves the acceptance of the incorrect reading Itamūn for Amenherkhepeshef (see p. 54, note 1). It is precisely on these weaknesses that Sethe seizes in his masterly criticism of this reading of the list.

He first notes that if the princes are all sons of Ramesses III it is strange that Praherwenemef, whom we know from other sources to have been the eldest son, should appear fifth in the list. Moreover two¹ of them (Nos. 3 and 9) bear the same name Amenherkhepeshef, which Sethe thinks improbable in two brothers. He also finds it hard to believe that no fewer than four² sons of a single king should have followed him on the throne, namely Ramesses IV, VI, VII and VIII, the more so as room has to be made among them for Ramesses V. Sethe argues moreover that the belief that all are sons of Ramesses III is based on the supposition³ that the names of the princes are as old as the sculptures of the temple, which date from Ramesses III. This cannot be the case, however, for according to Lepsius the king-names attached to the first three figures are of the same age as the prince-names of these and of the rest, and the only name which is different in style and obviously a later addition is the king-name added to the prince-name Ramesses Setherkhepeshef in No. 4. If this is true, all the names, with the exception of the later addition just mentioned, must date from the reign of No. 3⁴. Now No. 3 has generally been identified with Ramesses VII. But Sethe points out that if the very doubtful reading Itamūn be rejected for the more probable Amenherkhepeshef (see p. 54, note 1) then we have here simply the second cartouche-name of Ramesses VI, whose first cartouche-name stands under No. 2. These two cartouches together, Nos. 2 and 3, give us the full name of Ramesses VI. Now if the names were set up by Ramesses VI and not by Ramesses III, the names which follow his are far more likely to be his sons than his brothers, and this is the view which Sethe takes. He gives no opinion as to whether any of these sons except No. 4 ever came to the throne. Ramesses VII, now ousted from position No. 3 by the second name of Ramesses VI, he places later in the dynasty, and our Ramesses VIII, Usimarēc-Akhenamūn, he moves up to become Ramesses VII.

Who, then, according to this theory, is No. 1? He is the father of Ramesses VI, who was never king, but who, according to his son's belief, ought to have been. Consequently he inserted him in the list with a cartouche, but could find no more specific name for him than Ramesses. In support of the fact that Ramesses VI's father never reigned, Sethe brings forward the fact that a certain Queen Isis, who received a tomb by the favour of Ramesses VI, bears the title "royal mother" but not that of "royal wife." This woman Sethe takes to have been the mother of Ramesses VI.

The absence of Ramesses IV and V from the list can now be explained. We know that Ramesses V was the immediate predecessor of Ramesses VI, since the latter usurped his tomb⁵. We also know that Ramesses VI substituted his own name for that

¹ Sethe says three (Nos. 2, 3 and 9): I do not understand why.

² Still more seven, as supposed by Petrie.

³ This is not entirely true. PETRIE, *History*, III, 139, speaks of the "list which all agree must have been done under Ramesses VIII" (No. 4).

⁴ It is significant that Lepsius adds that all the names are more lightly cut than any of the undoubted hieroglyphs of Ramesses III on the same wall.

⁵ L., *D.*, III, 223 a.

of Ramesses IV on more than one monument¹. This establishes the order of these three kings.

According to Sethe, Ramesses IV was a son and successor of Ramesses III. He in his turn was succeeded by Ramesses V, probably his own son. This branch of the family then died out, or at any rate lost the succession, and its place was taken by a collateral branch represented not by a brother of Ramesses IV but by a nephew Ramesses VI, the brother (husband of Isis) being already dead. When Ramesses VI came to fill in the names in the List of Princes he carefully excluded the collateral branch consisting of Ramesses IV and V, filled places 2 and 3 with his own cartouches, and 4 to 10 with the names of his sons. No. 4 afterwards having king-names added. Place 1 he naturally filled with the name of his father, on whom, though he had never reigned, Ramesses VI's own claim to the throne rested.

Sethe's judgment of the lists was entirely founded upon Lepsius' description and figures of them. In order to test this I asked Dr. Alan Gardiner, on his return to Egypt this winter, whether he would be kind enough to re-examine the walls and give his opinion on a number of points. He has sent me the preliminary results of his examination, which are as follows:

1. The figures are almost certainly of the same date as the main mass of scenes and inscriptions on the walls, *i.e.*, they date from the reign of Ramesses III. The princes are represented as worshipping cartouches of Ramesses III, alternately nomen and prenomen.

2. The names and titles of the princes are shown by the method of their insertion in certain cases to have been added later. This was *a priori* probable from the fact that they intrude between each adoring prince and the cartouche which he is to adore.

3. The cartouches accompanying the titles and names of figures 1, 2 and 3 in each list show no sign of being of different date from the names and titles.

4. The two cartouches accompanying the fourth figure, one in each list, are clearly later than the others. In List B the cartouche is crowded in between the figure and the column of inscription, which might easily have been made narrower.

5. The uraei on the foreheads of the first four figures are not visibly marked out by the manner of their cutting as of later date than the figures, though on the evidence of 2 and 3 above they must certainly be so.

It will at once be realized that Dr. Gardiner's examination of the original bears out the accuracy both of Lepsius' statements and of the theory which Sethe has based on them. Chronologically three stages may be distinguished in the history of the scenes:

(1) The cutting of the figures of princes and princesses adoring cartouches of Ramesses III. This may reasonably be attributed to the reign of that king.

(2) The addition of the titles and names, including the cartouche-names of Nos. 1, 2 and 3 but not the cartouche-names of No. 4. Within this group no sub-division can be discerned, and it may therefore be attributed with comparative certainty to Ramesses VI, whose cartouches stand beside figures Nos. 2 and 3. No earlier king could have known the cartouche-names of one of his successors, and any later king would certainly have added his own cartouche-names.

(3) The further addition of the two cartouche-names of Ramesses VIII to the name and titles of figure No. 4. That these are later is clear not only from Dr. Gardiner's observation, but from the fact that they are written in a separate column and not incorporated in the one column as are the cartouche-names of Ramesses VI. Note too

¹ L., D., III, 219; — *Text*, III, 130; *op. cit.*, III, 229; — *Text*, III, 47-48).

that, unlike these, they are accompanied by the titles "King of Upper and Lower Egypt" and "Son of Rēc, Lord of Risings" respectively¹.

If all the names except those dealt with under (3) above are due to Ramesses VI, those which follow his own are, as Sethe points out, much more likely to be his sons than his brothers. The omission of Ramesses VII Itamūn still remains a puzzle. Sethe's proposal to place him later in the dynasty is not altogether acceptable in view of some evidence to be considered later which makes it likely that he succeeded Ramesses VI Nebmarēc. Two obvious possibilities, however, are either that he belonged to the collateral line and was regarded by Ramesses VIII as a usurper and therefore omitted, or that this latter king, when he inserted his own name, simply did not take the trouble to have that of his brother and predecessor inserted as well.

Thus there can be little doubt that this ingenious theory of Sethe's must in the main be accepted. It explains, as the more ordinary view cannot, the absence of a distinctive name under No. 1, whose identification with Ramesses IV was a mere guess. It relieves us from accepting the improbability that no fewer than eight sons of Ramesses III all came to the throne. It explains the absence of the name of Ramesses V from the list. The most important argument of all in its favour, however, is that drawn from the tomb of Queen Isis. The tomb was given to her "by favour of" Ramesses VI. Of what king was she the mother if not of Ramesses VI himself? Not, on the ordinary theory, of Ramesses IV or V, who are sons of Ramesses III, and therefore had a "royal wife" for mother. Nor yet of Ramesses III himself, who was a son of Setnakht², and whose mother was therefore presumably a royal wife. There seems nothing left but to suppose that she was the mother of Ramesses VI, and the moment we admit this, in fact the moment we admit the existence at this time of a royal mother who was not also a royal wife, the view that all the princes of the list are sons of Ramesses III goes to pieces. Petrie, in order to escape this disaster, suggests that "she may have been called royal wife in some other part of the tomb." This is highly improbable, for the double title "royal wife and royal mother" formed such an integral whole that it is not likely to have been split up, least of all in the formal inscriptions of a tomb, nor is it likely that any queen should deprive herself of so important a part of her titles.

Petrie further finds a chronological difficulty in believing that Ramesses VI was a grandson, not a son, of Ramesses III. He states that the date of the birth of Ramesses VI is fixed by his "horoscope" to 1198 B.C., and that Ramesses III was born in 1224 B.C. Quite apart from the question of what reliance may be placed on the horoscope dates, anyone who will look at the arguments on p. 3 of *History*, III by which the date 1224 is arrived at from the "horoscope date" 1318 for the birth of Ramesses II will see that we are there dealing with a tissue of mere guesswork, and that such a date as the 1224 in question is quite devoid of value. Be it noted, too, that a correction of only ten years backwards would remove the difficulty.

We must now turn to a discovery which might reasonably have been expected to throw fresh light on this problem even if it did not solve it once for all. In 1903-5 Schiaparelli conducted an excavation in the Valley of the Tombs of the Queens at Thebes³. Close to the already well-known tomb of Praherwenemef (No. 11) he discovered

¹ Doubtless omitted by Ramesses VI in his own case precisely because they would have overpassed the limits of a single column.

² L. D., 206 d, 212 a, 213 a; Pap. Harris, 75. 6 ff.

³ SCHIAPARELLI, *Relazione sui lavori della Missione Arch. Ital. in Egitto anni 1903-1920*, volume primo, *Esplorazione della "Valle delle Regine,"* 115 ff.

the tombs of three more¹ of the sons of Ramesses III, namely Setherkhepeshef, Amenherkhepeshef and Khaemwēse. That these four princes are actually sons of Ramesses III is placed beyond doubt by the extravagantly prominent part which that king plays in the scenes of their tombs, taken in conjunction with the titles borne by the princes. Setherkhepeshef is *sꜣ nꜣswt smsm mrꜣf*, "eldest son of the king, beloved by him," and *sꜣ smsm n htꜣf*, "eldest son of his loins": he bears the further title *kdꜣn n pꜣ ih*, "groom of the stable." We do not know the exact relation which the title *sꜣ nꜣswt smsm* bears to that of *sꜣ nꜣswt tpꜣ n hmꜣf* borne by Praherwenemef. It is possible that the latter was originally the eldest son and that after his early death Setherkhepeshef succeeded to the position. In the tomb of Setherkhepeshef, Schiaparelli found no sarcophagus and no proof that the prince had ever been buried there. He therefore suggests that he may have reigned as king and consequently been buried in a tomb in the Valley of the Kings.

The tomb of Khaemwēse is similar in style to the last. The lid of a sarcophagus was found in it. The prince bears the titles "sem-priest of Ptah," as on the Medinat Habu list, and *sꜣ nꜣswt n htꜣf mrꜣf*, "king's son of his loins, his beloved," *sꜣ smsm*, "eldest son."

The tomb of Amenherkhepeshef is stated in an inscription to have been "given by favour of King Ramesses III to the great royal children," which suggests that more than one of them was intended to be buried there. Perhaps Ramesses was by this time becoming tired of the expense of providing a separate burial-place for each of his numerous progeny. The prince bears the titles *rpꜣtꜣ hrꜣ tp ꜣꜣwꜣ*, "crown-prince at the head of the Two Lands," *sꜣ nꜣswt n htꜣf mrꜣf*, "king's son of his loins, his beloved" and "born of the god's wife, royal mother and great royal wife." The queen's name is unfortunately not given, but she must clearly have been a recognized wife of Ramesses III, probably Isis. The prince bears the further titles "great chief, overseer of horses of his majesty in the department of chariotry of Ramesses III." The tomb contained a granite sarcophagus, but Schiaparelli is not prepared to say whether the prince had ever been buried there.

How do these discoveries bear on the question of the Medinat Habu list? At first sight they would appear to accord better with Petrie's theory that all the princes in the list are sons of Ramesses III. Here, it might be said, is clear proof that Ramesses III actually had sons whose names were Amenherkhepeshef, Setherkhepeshef and Khaemwēse, three of the names in the list. What is more, even the titles seem to correspond, for Amenherkhepeshef is called "overseer of horses" in both cases, Setherkhepeshef, described as "overseer of horses" at Medinat Habu, is "groom of the stable" in the tomb, and finally Khaemwēse is called "sem-priest of Ptah" in both places.

The new evidence thus appears to carry a balance of favour on the side of Petrie's hypothesis. But this quickly disappears on further examination. In the first place it is by no means impossible in the nature of things that both Ramesses III and Ramesses VI

¹ LEFEBURE, *Zeitschr. f. äg. Spr.*, 1885, xxiii, 127, followed apparently by GAUCHIER, *Livre des rois*, tome III, fasc. i, 176, note 3, takes Tomb No. 11 to be that of the mother of Praherwenemef. For the evidence on which this is based, see COLIN CAMPBELL, *Two Theban Princes*, 2-3, and SCHIAPARELLI, *Esplorazione della "Valle delle Regine"*, 121-2, foot-note. It hardly seems to justify the conclusions drawn from it.

PETRIE, *History*, III, 134 and 145, suggests that the tomb is that of Ti Merenese, wife of Setnakht and mother of Ramesses III. This is a pure guess.

WEIGALL, *Guide to the Antiquities of Upper Egypt*, p. 288, numbers this tomb 42.

had sons bearing these names. In the second place, the names of the sons of Ramesses III whose tombs have been found show that in the naming of the royal family conscious imitation of the family of Ramesses II was at work. This imitation extended even to titles, and we need not doubt that Ramesses III gave to Khaemwēse the title "sem-priest of Ptah" because Khaemwēse son of Ramesses II had borne the same title. When once this principle is perceived, the similarity of names and titles between the occupants of Schiaparelli's tombs and the princes of the Medinat Habu list loses all value, for, if Ramesses VI had sons, it is natural that he should have conformed to the family tradition both in the matter of names and of titles.

We may perhaps go further than this. Would there not be a serious danger from Petrie's point of view in claiming the owners of the new tombs as sons of Ramesses III? If they were buried here¹ as youths (for as such the wall-scenes represent them), how can two of them have ruled, in middle life, as Ramesses IX and X respectively, as Petrie would have us believe? To this it might be replied that they were never buried in these tombs, and that in fact Schiaparelli found no certain proof of burial in any of the three, for a broken sarcophagus proves nothing. Yet, though it is a well-known fact that the Egyptian believed in being ready for death and in beginning his tomb in good time, nowhere have we evidence that he carried foresight to such pessimistic lengths as to cover the walls of his tomb with representations of himself still wearing the side-lock of youth. That the princes died young seems therefore highly probable.

It is perhaps, however, wiser not to press this point, and to conclude that the discovery in the Valley of the Queens leaves the Medinat Habu question much as it found it.

Returning now, after this long but necessary digression, to Ramesses V, we find that the evidence for placing him after Ramesses IV is as follows. He must have immediately preceded Ramesses VI, who usurped his tomb. But Ramesses IV must also have been earlier than Ramesses VI, who has more than once erased his name on monuments and substituted his own. Ramesses IV, however, we have already seen was the immediate successor of Ramesses III. There remains nothing therefore save to place Ramesses V between IV and VI. If any other king came in between IV and V, no trace of him has survived.

The length of this king's reign is unknown. The highest year as yet found is Year 4, which occurs in a Turin papyrus concerning a priest of Elephantine, already referred to (p. 53), P.-R., liv, l. 14, and also on an ostrakon at Turin².

Ramesses VI

Nebmarēc-Miamūn, Ramesses-Amenherkhepeshef-Neterhekon


The position of this king in the list we have already discussed. No date in his reign is known, though, judging by the number of monuments which he has left, he must have been very far from insignificant or ephemeral.

¹ COLIN CAMPBELL, *Two Theban Princes*, 14, is not justified in assuming that the insertion of the epithet *mꜥ hꜣw* after the name of a prince in the Medinat Habu list proves him to have been dead.

² MASPERO, *Rec. de trav.*, II, 117.

Ramesses VII

Usimarē-*Miamūn*-Setpenrē, *Ramesses-Itamūn-Neterhekon*

A few years ago I wrote in this *Journal* (XI, 72 ff.) some account of an unpublished Turin papyrus which made it probable that this king was the immediate successor of Nebmarē *Ramesses VI* and that he reigned at least six years. A re-examination of this papyrus in 1927 enables me to advance what was there regarded as a possibility or a probability to what is almost a certainty. In the middle of recto 3. 4 is mounted a misplaced and reversed fragment. This fragment I now observe can be fitted with absolute certainty at the end of verso 1. 7. On the recto side this now gives us three more signs at the end of 3. 14 (p. 73 of the article) and they are . This very fortunately puts the sense of the four lines 3. 12-15 beyond all doubt, and they are to be read as follows: "Total given to him [in goods] of every kind, 1210 *deben* of copper. [Giv]en to him [from] Year *x*, month *y* of the...season day 1 of King Nebmarē *Mi[amūn]*, the Great God, up to Year 6 (?)...of King Usimarē Setpenrē *Mi(amūn)*, our lord, amounting to...years..... Complete total, 1364 *deben* of copper."

No one who has any experience of account papyri will dispute that here a total is being given covering a certain number of years in the reign of Nebmarē and a certain number in that of Usimarē¹. In the portion of the papyrus which precedes this summing up we have dates in Years 4, 5 and 6 of a king not actually named. Thus the summing up was made in or just after Year 6 of *Ramesses Usimarē (VII)* and covered the whole of his reign up to that date as well as the last year or years of his predecessor Nebmarē. The detail of the years of Nebmarē and Years 1 to 3 of his successor has disappeared in the missing first page or pages of the recto.

On p. 74 of the article I have discussed the evidence of the verso of this papyrus, dated in Year 7, and suggested the possibility that this year also belongs to *Ramesses VII*. It would be unwise to press this point, and we may be content with the evidence of the recto, which makes it almost a matter of certainty that Usimarē was the successor of Nebmarē and reigned at least six years.

Monuments of this king are so rare that it is worth while to mention a possible one which has escaped notice. The Turin papyrus numbered Pl. lxxii by Pleyte-Rossi is part of the verso of (and therefore later than) the tomb-plan of *Ramesses IV*. It consists of two texts numbered i and ii by Pleyte-Rossi, quite possibly by the same hand, and both forming part of the *Necropolis Diary*. Page i, ll. 2-8 contain a list of clothes given in Year 7 to the citizeness Taurtemheb as her share in a division of the clothes of the scribe Amennakht between his children and her. Possibly she was his wife. The division was made by the scribe Hori of the necropolis. Lines 9-11 record other matters. In page ii, line 3 we meet a date in Year 1. This page must be later than page i, lying as it does on the left of it. In lines 5-6 we read: "Twenty-first day of the...month of...the workmen went up...King Itfamūn." The king's name is slightly obscured by a fold in the papyrus, but Černý and myself, when we collated the papyrus in 1926, agreed that it was certain. Now Itfamūn (*Itamūn*) is *Ramesses VII*, and since he is neither referred to as Pharaoh nor given the epithet *pi-n nb*, "Our Lord," he is dead. The phrase to "go up" *tsi* in the *Necropolis Diary* is used almost invariably of going up to the tombs, and consequently it is probably the tomb of *Ramesses VII* which is here referred to. That it is referred to at all makes it probable that work was

¹ It is of course just possible that the short reign of a king intervening between the two is included.

still in progress there, and therefore that the Year 1 is that of Ramesses VIII. Unless we suppose a large gap between pages i and ii of the papyrus which of course is possible, though not, in view of the homogeneity of content, very probable. Year 7 of page i will be that of Ramesses VII and we should have the implication that he reigned seven years¹.

Ramesses VIII

Usimarēc-Akhenamūn, Ramesses-Setherkhepeshef-Miamūn

The existence of this king is vouched for only by the cartouches of figure No. 1 in the Medīnat Habu List of Princes and by three scarabs. The list indicates no more than that he is later than Nos. 2-3. Ramesses VI. There is of course nothing to prove that he was his immediate successor, and his place in the dynasty must still be regarded as uncertain. No dates of his reign are known.

At this point we are met by a very definite break in the evidence. We do not know who succeeded Ramesses VIII, and we are therefore compelled to work backwards from the end of the dynasty. Four epochs are with certainty to be placed towards its end, namely the reigns of Ramesses IX (Nefekerēc), Ramesses X (Khepermarēc) and Ramesses XI (Menmarēc), together with the period known as the *whm mswt*, "Renewal of Births," or, more conveniently, "Renaissance." We must now attempt to determine the lengths of these four periods and the order of their succession.

Ramesses IX

Nefekerēc-Setpenrēc, Ramesses-Miamūn-Khaemwēse

This reign is commonly stated to have lasted 19 years. The evidence given for the statement is threefold:

(a) The docketts on the verso of Pap. Abbott. These consist of two lists of thieves each dated in "Year 1 corresponding to (*hft*) Year 19." The Year 19 is generally assigned to Nefekerēc and the Year 1 to the *whm mswt*, which is supposed to have immediately followed his reign.

(b) Maspero long ago drew attention to a papyrus of fishermen's accounts at Turin² (Cat. 2075) in which dates in Year 19 of an unnamed king are immediately followed by dates in Year 1: he attributed the Year 19 to Nefekerēc and the Year 1 to the reign of Khepermarēc, which he held to be identical with the *whm mswt*³.

(c) In this number of the *Journal*, Dr. Botti refers to a Turin papyrus (Cat. 1932 + 1939) bearing two separate texts on the recto and one on the verso. Of the two on the recto that nearest the right-hand edge of the papyrus is dated in Year 2 of Khepermarēc, and the other in Year 19 of a king unnamed. This king Dr. Botti would

¹ Maspero (*Les momies royales*, 665, note 3) attributes the Year 1 of this papyrus to Menmarēc on the ground that the preceding Year 7 is that of Khepermarēc "his predecessor." He remarks that his reasons are "too long to be stated here." He is certainly wrong. The entry of Year 7 is attributed by ERMAN, *Zwei Aktenstücke der thebanischen Graberstadt*, 342, to Ramesses IV, but without, so far as I can see, any reason. Spiegelberg, who published it in his *Studien und Materialien*, 92-4, does not attempt to date it. The scribe Amennakht may be traced back to Year 21 of Ramesses III, when he appears in the two documents published by Erman, *op. cit.*

² *Mummies royales*, 658.

³ *Op. cit.*, 660.

identify with Neferkerē. He is inclined to believe that the *whm mswt* is identical with the reign of Khepermarē, though he would not exclude the possibility that it followed his reign.

Now what does this evidence amount to? Document (*a*) in itself proves very little. The dockets are obviously later than the recto of Abbott, *i.e.*, than Neferkerē's 17th year. Consequently their "Year 19" might conceivably belong to his reign. On the other hand it might belong to a still later reign, and there is nothing to set against this except the current belief that an added text on a papyrus is never much later in date than the original text, a belief which, even if justified, is very indefinite. The dockets therefore do not prove that Neferkerē reigned 19 years.

Document (*b*), the fishermen's accounts, brought up as corroborative evidence for the attribution of the Year 19 of Abbott to Neferkerē, is a double-edged weapon, for in it we find that Year 19 instead of "corresponding to" Year 1 is succeeded by Year 1. None of the historians who have used this piece of evidence appears to have noticed this very important point. It might not unreasonably be adduced as evidence to show that the Year 19 mentioned in the two documents cannot be one and the same. Yet we shall not insist on this, for there is just the possibility that the two apparently inconsistent systems of reckoning may be reconciled in such a way as to allow the Year 19 to refer to the same king in both cases.

Now Botti has shown that of the six fishermen mentioned as providing the supply of fish for the necropolis in this papyrus, four are found in the same employ in the Diary of Year 17 of Neferkerē and all six in the Diary of Year 3 of Khepermarē (Pap. Chabas-Lieblein, No. 1). The temptation to assign the papyrus to the 19th year of Neferkerē and to draw the almost inevitable conclusion that it was succeeded by the first year of some other king (possibly Khepermarē) or epoch is very strong. If we refuse this we are faced with the necessity of believing that a group of fishermen retained their duties over a period of at least nineteen years: that one man should have so long a tenure is not impossible. That no fewer than six should do so is highly improbable. There is therefore a strong possibility that in this papyrus we should see evidence that the reign of Neferkerē lasted 19 years, and that that of Khepermarē followed it at a not very long interval.

With the conclusions drawn by Dr. Botti from Document (*c*) I find myself in considerable disagreement. Here we have a papyrus on the recto of which are two texts. That on the right, *i.e.*, nearest to the point where a scribe would begin to write, is dated in Year 2 of Khepermarē: it is written in a fine large upright hand. That on the left of it is dated in Year 19 of an unnamed king, and is an account of grain received for the staff of the necropolis. When on the same side of a papyrus we find two pages written the same way up and adjacent the one to the other it is an almost certain inference that the one on the right is the earlier, for a scribe began on the right, and never, except for special reasons, left a large blank space at that end of his sheet. *A priori*, then, one would expect the page dated Year 19 to be later than, not earlier than, that dated in Year 2 of Khepermarē. This judgment seems to me to be in no way invalidated by the verso. Here we find another document, a list of the workmen of the necropolis, dated in a year which is lost, of the reign of Khepermarē. This text is not in my opinion in the same hand as that of Khepermarē on the recto, but in one which resembles it closely. Thus the papyrus as a whole has every appearance of having been originally written during the reign of Khepermarē and of having had a short text added to it on the unused portion of the recto in the 19th year of a later king. At any

rate the burden of proof lies with those who wish to assign the earlier date to the text of Year 19. I am unable to accept Botti's defence of this view. He suggests either that a new piece of papyrus had been glued over just as much of the document of Year 19 of Neferkerēꜥ on the recto as was needed to insert a title-docket¹ (for such he conceives the text of Year 2 to be) to the Khepermarēꜥ document on the verso, or that that part of the text of earlier date which originally covered this space was erased, the rest, on its left, being spared since the space was not needed. The first explanation seems unlikely partly because there is no evidence of this kind of wholesale patching of papyrus by the scribes and partly because I can see no trace of three layers of papyrus at this point: the second I cannot accept because the papyrus does not show any sign of being palimpsest.

There is unfortunately no prosopographical evidence to help us. In the text of Year 19 no persons are mentioned save a scribe whose name either was, or at least began with, Mery. We have therefore no sufficient evidence for assigning this text to the reign of Neferkerēꜥ and certain reasons for thinking that it may well be later, perhaps from the reign of Menmarēꜥ².

The list of workmen on the verso is of importance for our purpose, for it contains several names which occur both in the list of the Diary of Year 17 of Neferkerēꜥ and also in an unpublished Diary of Year 16, which various indications seem to show should be attributed to the same reign. This makes it difficult to separate the reign of Khepermarēꜥ by any very great distance from the last years of that of Neferkerēꜥ.

Of the three documents (*a*), (*b*) and (*c*), then, none is quite decisive in giving to Neferkerēꜥ a reign of 19 years, though one, (*b*), points very strongly in that direction. If we except this group of texts the highest date which can be with certainty attributed to him is Year 17, the date of the B.M. papyri 10053 recto (= Harris A), 10068 recto (see *Journal*, xi. 162-3) and of the Necropolis Diary at Turin, where the king's name does not actually occur but may be deduced with certainty from the fact that the theft dealt with by Harris A is there referred to. Papyrus B.M. 10054 gives a date in Year 18 (recto 3. 7) which is in all probability referable to Neferkerēꜥ, but proof is impossible. Consequently the Year 17 must stand as the maximum.

Ramesses X

Khepermarēꜥ-Setpenrēꜥ, Ramesses-Amenherkhepeshef

Only one dated document exists for this reign. The others attributed to this king by the historians, *e.g.*, Petrie and Gauthier, are all actually dated in the *whm mswt* and must for the present at least be excluded. The only certain document is the Papyrus Chabas-Lieblein No. 1, which has been shown to be dated to the third year of Khepermarēꜥ³, and Year 3 is thus the highest date yet known to us from the reign. This same

¹ The text on the recto is to my mind not a mere "title" or "title-docket" to the text on the verso but a complete text in itself. There remain only the date, titles and names of the king, and the name of the necropolis. The rest is lost.

² Dr. Botti sees an objection to this in the script, which for him is of the type associated with the reign of Neferkerēꜥ. I have never been in full agreement with him in his belief that definite tendencies can be traced in the hieratic script as it approaches the end of the dynasty. To my mind so much depends on the idiosyncrasies of particular scribes that over so short a period as, say, thirty years no movement in a definite direction can be traced.

³ See BOTTI-PEET, *Il Giornale della Necropoli di Tebe*, fasc. 3.

papyrus is the only valuable piece of evidence which we have for fixing the position of this king. In 3. 17 there is a reference to King Neferkerē. The vizier had apparently asked the necropolis for men to be used in transporting certain clothes of King Neferkerē. The request is refused, the workmen being at the time in a rebellious mood, and a workman replies "Let the vizier (himself?) carry the clothing of King Neferkerē and the cedar wood." We may safely infer from this that Khepermarē is to be placed later than Neferkerē¹, though the absence of the title "The Great God," usual in speaking of a dead king, after Neferkerē's name is striking, and suggests that he may have been still alive, Khepermarē being a usurper. The fact that of the ten fishermen mentioned in this papyrus as supplying fish to the necropolis no fewer than six were doing the same thing in Year 17 of Neferkerē indicates a proximity between this third year of Khepermarē and the end of Neferkerē's reign, and this is supported by the fact that we still find Khaemwēse as vizier and Pewerō as prince of the West of Thebes. The other persons mentioned in this papyrus and also known to us from other sources are the vizier's scribe Amenkhau, who reappears in the Turin papyrus dated in Years 4 and 5 of the *whm msut*, and Khaemhezēt scribe of the necropolis, who appears, though without the addition of the words "of the necropolis," in a piece of the Necropolis Diary dated in the Year 16², and probably attributable, as the combination of the vizier Khaemwēse, the chief workman Woserkhepesh and the scribe of the necropolis Horisherī shows, to the reign of Neferkerē.

Ramesses XI

Menmarē-Setpenptah, Ramesses-Khaemwēse-Miamūn-Neterhekon

The position of this king has always been regarded as certain since Maspero pointed out³ how in the temple of Khonsu at Karnak, partly built during his reign, the position and titles of the king were gradually usurped by the chief priest of Amūn, Herihor. The natural interpretation of this evidence is that Herihor was the immediate successor of Ramesses Menmarē, and there is no other evidence which makes such an interpretation impossible or improbable. That Menmarē was later than Neferkerē seems clear from the Papyrus of Wenamūn, which Erman⁴ is surely right in dating to the fifth year not of Herihor but of Menmarē. In this papyrus the prince of Byblos reminds Wenamūn

¹ Maspero had already observed (*Les momies royales*, 659-60) that Pap. Chabas-Lieblin showed the priority of Neferkerē (mentioned recto 3. 17) to Khepermarē, whose name stands on the verso. It is worth while to observe that in the passage given by him from Champollion, the latter has quoted as occurring under the date Paoni 22 in Chab.-Liebl. a passage coming from a totally different papyrus, namely Pleyte-Rossi xxxiv. No wonder Maspero was puzzled and thought that Champollion must have had access to fragments of Chab.-Liebl. since lost! Where Champollion found the receipt bearing a date in the reign of Ramesses IV Hekmarē-Setpenamūn which he transplants to the verso of Chab.-Liebl. I cannot imagine. There are further confusions in his account. The king, a scribe of whose temple is mentioned under Pharmuthi 25, is Ramesses III Usimarē-Miamūn (Chab.-Liebl. 2. 8) not Ramesses IV: the king whose name occurs in 6. 7 under the date Mesore 14 is Ramesses II (not Ramesses III as stated in a parenthesis by Maspero), and the king referred to in 2. 26 on the 26th Pachon is the same Ramesses II and not "son fils et successeur."

² Pap. Turin, P.-R. xc, line 8. This papyrus is in reality part of P.-R. lxxxiii, line 1 of Col. ii of xc following directly upon line 4 of Col. ii of lxxxiii A. A scribe Khaemhezēt also occurs in P.-R. x, line 10: the papyrus is dated in Year 7, but of what king is uncertain.

³ *Zeitschr. f. äg. Spr.*, 1883, 75-7. This episode is admirably treated by BREASTED, *Ancient Records*, §§ 608-26.

⁴ *Zeitschr. f. äg. Spr.*, xxxviii, 2.

of the fate of the envoys who came from Egypt to his city in the time of Khaemwōse¹, by whom must surely be meant Nefekerēc, and remained there 17 years². That Menmarēc is later than Khepermarēc is also clear from the fact that a note dated in his reign is found on the verso of Papyrus Chabas-Lieblein³.

The position of Menmarēc at the end of the dynasty may thus be accepted as almost certain. Several dates from his reign are known. The coffins of Ramesses II and Seti I⁴ both bear hieratic inscriptions dated in Year 6, and as Herihor still appears in these as High Priest, and not yet as king, we may safely attribute them to Menmarēc.

Turin possesses dated papyri of Years 12 and 17. The former of these is that given by Pleyte-Rossi in Pl. lxy, c. When collating this in 1923 I was surprised to find that it forms part of the long account papyrus, P.-R. xvi, xvii, c, ci, clv, clvi and clvii, lying to the right of Plate c with a very short gap. The main historical interest of the papyrus is that it shows us the veteran prince of the West Peverō still living in Menmarēc's twelfth year, in the company of younger officials such as the scribe of the necropolis Dhoutmose. The papyrus dated in Year 17 is a fine but incomplete letter, Pleyte-Rossi, lxvi-lxvii, written from the king to Panehsi the army commander and "Royal Son of Kush," and mentioning the butler Yenes.

The only other date known from this reign is Year 27, on the stela of a scribe called Hori from Abydos, and this is therefore the minimum length for the reign.

The Renaissance (*whm mswt*)

The indications so far observed point to the fact that Nefekerēc reigned certainly 17 years and possibly 19, that Khepermarēc was a successor of his, possibly though not necessarily immediate, and that Menmarēc was later than both.

The next step in our argument must be to examine the period known as the *whm mswt* or Repeating of Births. The dates known from this period are as follows:

(1) Year 1. Pap. Mayer A, 1. 1.

(2) Year 2. Pap. Mayer A, 8. 1, 11. 1; Pap. B.M. 10403⁵, 1. 1.




(3) Years 4 and 5. Mentioned in an unpublished papyrus in Turin (Cat. 1903 180).

This is a record of rations of various kinds issued to the necropolis. The officials

¹ If the vizier of this name is meant, which is improbable, the time implications are much the same.

² It is clear from this that more than seventeen years have elapsed since these messengers were sent, for Wenamūn saw their tomb: in other words they were sent more than twelve years before the accession of Menmarēc. Unfortunately this fact is not of the least use to us as we do not know in what year of Nefekerēc they were sent.

³ See BOTTI-PEET, *Il Giornale della Necropoli di Tebe*, fasc. 3.

⁴ MASPERO, *Les momies royales*, 553-63 and Pls. x-xvi. It needs only a glance at Pls. xB and xii to see that on the latter the hieratic inscription has been doctored, doubtless to ensure clearer reproduction. Thus the group  which appears on xii at the end of line 1 is incorrect, no vertical stroke appearing in xB. Consequently the word  "vizier" probably stood at the beginning of the lacuna, perhaps followed by the vizier's name. We must therefore not read with BREASIED, *Ancient Records*, § 593, "the vizier, the High Priest...Herihor," giving the impression that Herihor held the office of vizier, but rather "the vizier [X. and] the high priest Herihor." It is unfortunate that in the inscription on the coffin of Ramesses II there is a lacuna at precisely the same spot. MASPERO, *op. cit.*, 557, fig. 15, shows at its beginning  "The chief of..." but it is difficult to see how this title is to be completed satisfactorily, and it would be well if the coffin were examined again with a view to testing Maspero's reading and deciphering, if possible, the rest of the phrase.

⁵ Also probably, to judge by the official personnel, Pap. B.M. 10383, dated Year 2, without king-name.

mentioned are the overseer of the treasury Wenennefer, the deputy of the treasury Hori and the vizier's scribe Amenkhau.

(4) Year 6. Ambras Papyrus, Vienna.

The *whm mswt* then lasted at least six years and was in ordinary use for dating purposes. Most of the historians have avoided the problem by quietly assigning all the dated documents of this period to corresponding years in the reign of Khepermarē, giving as a justification for this the testimony of the Abbott dockets. We have already seen that this is pure assumption. What then are the possibilities with regard to this period? They are as follows:

- (1) The *whm mswt* was part of Neferkerē's reign.
- (2) It followed this immediately.
- (3) It is equivalent to the reign of Khepermarē.
- (4) It followed this reign immediately.
- (5) It formed part of the reign of Menmarē.

Now the astonishing thing about the papyri dated to Years 1 and 2 of this era is that their personnel is entirely different from that of those of the later years of Neferkerē. In the trial of Mayer A and B.M. 10052 the officials are:

The vizier Nebmarēnakht.

Overseer of the treasury and granary Menmarēnakht.

Steward and royal butler Yenes.

Steward and royal butler Pameriamūn, scribe of Pharaoh.

Of these persons Nebmarēnakht was vizier in Year 14 of Neferkerē (Abbott, 4. 15) and also in Year 1 corresponding to Year 19 (Abbott dockets, A. 20). He is also found along with Menmarēnakht and Yenes in Pap. B.M. 10383, a document dated in Year 2 but with no king-name. Menmarēnakht occurs also in Pap. Turin, P.-R. lxi, line 6 (collated), a papyrus where he is associated with the vizier Wenennefer¹: this vizier is dated by a relief at Karnak (*Rec. de trav.*, XIII, 173) to the reign of Menmarē, and, what is more, the papyrus itself is marked as coming very late in the dynasty by its reference to the scribe of the necropolis Dhutmose. Pameriamūn is not known elsewhere, but Yenes reappears in a letter of Year 17 of Menmarē in connexion with the famous viceroy of Nubia Pnehesi (Pap. Turin, P.-R. lxxvii. 15).

The connexions of the official personnel of the *whm mswt* seem thus rather to look forward towards the reign of Menmarē. It has nothing in common with that of the robbery papyri of the Years 16 and 17 of Neferkerē, the chief figures of which are the vizier Khaemwēse, the high priest of Amūn Amenhotpe, the prince Pewerō, the butlers Nesamūn and Neferrēemperamūn, and the prince Pesiūr. And yet there are puzzles here. Nebmarēnakht was vizier in Year 14 of Neferkerē (Abb. 4. 15), but Khaemwēse was vizier in Years 16 and 17. Again Nebmarēnakht was vizier in "Year 1 corresponding to Year 19," and also in Years 1 and 2 of the *whm mswt*. A witness in the trial of Pap. B.M. 10052 (8. 19; date *whm mswt* Year 1) states that he remembers the putting to death of certain tomb-thieves "in the time of the vizier Khaemwēse." Yet in Pap. Chabas-Lieblein No. 1, which is dated in Year 3 of Khepermarē, Khaemwēse is vizier and Pewerō is prince of the West of Thebes!

It is possible that we may get some light in the darkness if we can determine the nature of the period known as *whm mswt*. It must have been a remarkable event which

¹ GAUTHIER, *Livre des rois*, III, i, 209, is wrong in assigning this papyrus to the reign of Neferkerē. I had made the same mistake myself and was corrected by Černý.

could induce the conservatively-minded Egyptians to abandon the time-honoured custom of dating by king-years. In fact it is only with reluctance that we are prepared to admit that such a thing really happened, and we wonder whether some king may not have borne *whm mswt* "Renewing Births" as one of his names, but of this there is no trace. Two earlier kings used it as a name—Amenemmes I of the Twelfth Dynasty, and Seti I of the Nineteenth. Both these kings, as Gardiner has pointed out to me, may well have regarded themselves as founders of dynasties; Amenemmes with considerable right, Seti with somewhat less. As used for dating purposes in the Twentieth Dynasty the phrase might be expected to indicate a re-establishment of the normal state of things after a period which had been regarded officially as abnormal. Such abnormality might have consisted in nothing more than the temporary holding of the throne by a usurper: if this is the case it has left no other visible trace. It might, on the other hand, refer to some event of quite a different type, and two are known to us which seem to call for consideration. The first is the "war of the chief priest of Amūn Amenhotpe," and the second is the invasion of Egypt, or at least the Theban area, by foreigners, of which we have such manifest evidence in the Necropolis Diary.

Let us consider first the war of the high priest Amenhotpe. It is referred to in two passages, firstly Pap. B.M. 10052, 13. 24, where we have a bare mention of "the war of the high priest of Amūn," and in Pap. Mayer A, 6. 3 ff., where a witness states that a certain event took place between the sixth and the ninth months¹ of "the violence done to Amenhotpe the high priest of Amūn." We do not know the nature of this "violence" (*th*) but it is not impossible that we are to see in it some kind of attack upon the temporal power of the priesthood of Amūn, which was at this time increasing at an alarming rate². We cannot even fix the date of the event. The witness is speaking in the first year of the *whm mswt*, and the robbery from the portable chest in which he is concerned must have taken place some years earlier, for two of the other witnesses, brought up to be questioned concerning the movements of their fathers, suspects who have since died, state that they were little boys when the crime was committed. It is not easy to know how much time must be allowed for this, the more so as they would probably exaggerate their extreme youthfulness at the time in order more completely to clear themselves of any suspicion of implication in the thefts. Still a space of four or five years is probably the minimum. Thus the *whm mswt* cannot mark a restoration after the war of the high priest, for the facts just related show that the two events are separated by a considerable interval³.

We have next to consider whether the *whm mswt* may not mark a restoration after a period of foreign invasion. The evidence for such an invasion I have published elsewhere⁴, and here I need only add two passages which point in the same direction. The first is Pap. B.M. 10383, 2. 5, where an official exculpates himself with regard to thefts of copper from the doors of the House of Pharaoh by saying, "I left the House of Pharaoh when Painhasy came and did violence (*th*) to my superior officer, though

¹ See *Journal*, XII, 254-9.

² See, however, below, p. 68.

³ The same witness refers in 6. 9 to a clearing up of the disturbed temple after the war was over. In my edition I have translated his words, *hr w tote spd*, as "when order was restored," but this would require *sspd* and not *spd*. Can the words mean simply "When all was over," literally "When one was ready"? For *spd* "be ready" in the sense of "finished" the German *fertig* provides a good parallel.

⁴ *Journal*, XII, 257-8. See also WAINWRIGHT, *Ann. Serv.*, XXVII, 76 ff.

from this point of view large numbers of ostraca of the period, both at Cairo and elsewhere. It may, however, be worth while to point out very shortly some of the difficulties involved in the use of prosopographical evidence in the present case.

At certain periods of Egyptian history we can establish the succession of several kings from the biographies of great officials who recount in due order their careers under each of the kings whom they served: but in our material for the late Twentieth Dynasty there is nothing of this kind, and we have to fall back on chance references to persons or officials in different papyri. Of how little real use these are to us will be apparent from the following considerations:

1. Certain names are extremely common, especially among the workmen of the necropolis, for example, Nesamūn. Hori and Pakharu. Confusion is therefore very easy, the more so as it was customary at the period to name the grandson after the grandfather. Thus even the name "Hori son of Amenkhau" occurring in two papyri must not be equated without further evidence, for the Hori of the one may well be the grandfather of the Hori of the other, and similarly with the Amenkhau.

2. The almost invariable prefixing of a title to a proper name goes far to mitigate this difficulty, but does not entirely remove it. Thus though "the scribe Hori" gives a narrower field than simply "Hori" it is still insufficient, for out of every hundred Horis, and there probably were a hundred in Thebes, several may have been scribes. Only when the title is unique or nearly so, *e.g.*, "vizier" or "scribe of the necropolis," do we approach certainty.

Three further considerations apply specially to the case under consideration. They are:

3. The periods whose order we are trying to determine are very short. The Renaissance possibly only six years, and the reign of Khepermarē three years on the highest known date. Large numbers of officials may quite naturally have remained in office throughout the whole of the two periods, if they were adjacent. Consequently, even if we possessed complete lists of the chief Theban officials of the two periods, they would in all probability prove so similar that nothing could be argued from them as to the order of the two.

4. The few documents which we possess from this epoch are of very different types. Whereas some give us the names of several of the high officials of their period, others are concerned almost entirely with a totally different stratum of society, and name none but cemetery workers or fishermen. Thus the various types of document offer no elements of comparison one with another.

5. A change of government such as was not improbable in these troubled times might lead to a complete change of officials at one blow, from the vizier downwards. Consequently when we find two papyri in which the main offices are held by completely different sets of men we must not argue that they differ considerably in time, for the cause may be nothing more than a change in government.

Such are the difficulties with which it is necessary to reckon in an enquiry of this kind. The accompanying table gives a conspectus of some of the material. It is limited to the more important officials in two groups of papyri, firstly a set of documents from the British Museum (with the exception of Pap. Amherst) dealing with tomb-robberies¹, and secondly a set of papyri in Turin. It shows very clearly the complete break between the main officials of the end of Nefekerē's reign and those of the Renaissance, but what it cannot show us is whether this break is due to length of time or to change of government.

¹ For a description of these papyri, see *Journal*, xi, 37 ff., 162-4.

Name	Title	Rameses XI	Rameses X	Renaissance	Uncertain	Rameses IX
Khaemwese	vizier	Turin, P.-R. 1x1†		10383†	Abbott docket	Turin Diary
Amenhotpe	high priest of Amun		Yr. 18	Mayer A	10068 <i>es. p. 1</i>	10053 <i>ro.†</i>
Pewerö	prince of the West	Pap. Chabas-Lieblein No. 1	Yr. 3	Yrs. 1-2	10054 <i>es. pp. 2-4</i>	10068 <i>ro.</i>
Woserkephesh(ef)	chief workman		×	10403	10068 <i>es. pp. 2-8</i>	10054 <i>es. p. 1†</i>
Nesamun	butler and scribe of Pharaoh		×	10052	10053 <i>es.</i>	Amherst
Pesnu	prince of Thebes		×	Yr. 1		Abbott
Noferrempemamun	butler		×	Yr. 1 = Yr. 19		
• Wenemefer	scribe of the quarter		×	No date		
Kashuti	scribe of the army		×	Yr. 6		
Wenemefer	vizier		×	Yr. 12		
Menmare'naakt	overseer of the treasury		×	Yr. 9		
Nemmare'naakt	vizier		×	Yr. 17		
Aninakt	district officer (<i>w'rtar</i>)		×	Yr. 17		
Amenkhau	district officer (<i>w'rtar</i>)		×	Yr. 16		
Yenes	butler		×	Yr. 16		
Pememamun	scribe of Pharaoh		×	Yr. 16		

† King-name not given, but attribution certain.

§ Mentioned, but not as being still in office.

We may now sum up the answers suggested by our enquiry to the questions which we originally put to ourselves concerning the position of the Renaissance.

1. Was it a part of the reign of Neferkerē? This possibility cannot be ruled out. If the Year 19 of the dockets of Pap. Abbott is really that of Neferkerē, and the Year 1 to which it corresponds is that of the Renaissance, then it seems clear that the Renaissance either was a name for the last years of Neferkerē, from Year 19 onward, or immediately followed his reign, which in this case ended in Year 19. With regard to the two assumptions made here, it may be said that the assignment of Year 1 of the dockets to the Renaissance is very reasonable in view of the fact that the thieves mentioned in them do actually come up for trial in Year 1 of that epoch (Pap. B.M. 10052 and Mayer A), and it is hardly likely that a considerable time should have elapsed, as for example the reign of Khepermarē with its minimum of three years, between the denouncement and the trial. With regard to the assignment of Year 19 to Neferkerē, the situation must be faced that if it is not assigned to him it can only belong to Menmarē, and the whole of the Renaissance would thus be transplanted into his reign. This possibility will be considered under 5.

2. Was the Renaissance a separate period immediately following the reign of Neferkerē? This has practically been dealt with above. It is just possibly the correct solution. Those, however, who hold this view and attribute the Year 1 of the fishermen's account papyrus to the Renaissance will have to explain why this Year 1, which here appears to follow Year 19, is represented in the Abbott dockets as "corresponding to" it.

3. Is the Renaissance identical with the reign of Khepermarē? This is the one supposition which can be ruled out with comparative confidence. The title docket on the verso of Pap. Chabas-Lieblein No. 1 shows that during the reign of Khepermarē the years were numbered in the normal manner; that two different dating systems should be in existence side by side for no less than six¹ years in the same part of Egypt is unthinkable.

4. Did the Renaissance immediately follow the reign of Khepermarē? If we accept the Year 19 of the Abbott dockets as that of Neferkerē, the answer to this question must be no, unless we are prepared to deny that the Year 1 which there corresponds to it is that of the Renaissance. It is just possible to do this on present evidence or rather lack of evidence, and to suppose that this Year 1 is that of Khepermarē, and that the thieves mentioned in the dockets remained untried throughout the three or more years of Khepermarē's reign, to be brought to book in the first year of the Renaissance which immediately followed this. Yet this cannot be regarded as very probable, as we saw above. It would be for the advocates of such a theory to explain why Year 19 of Neferkerē should be said to "correspond to" Year 1 of his successor Khepermarē.

5. Was the Renaissance part of the reign of Menmarē? This is a highly attractive possibility. If the Year 19 of the Abbott dockets does not refer to Neferkerē it must refer to a later king, and since we may with great probability rule out Khepermarē, whose highest known date was three years, we should have good reason for attributing it to Menmarē. Such a theory is, however, not without its difficulties. Nebmarēnakht was vizier in Year 14 of Neferkerē (Pap. Abbott, 4. 15) and here again he is found as vizier in Year 19 of Menmarē, at least twenty-five years later. This is of course not impossible, the more so as he was presumably named after, and hence born under, Nebmarē Ramesses VI, and was consequently quite young when he became vizier in the

¹ Year 6 being the highest known Renaissance date

reign of Neferkerē. A much more serious difficulty lies in the fact that according to Pap. Turin Pleyte-Rossi, lxi (collated, together with considerable unpublished portions), a certain Wenennefer was vizier in Year 18 of Menmarē. It is true that the papyrus does not name the king, but we know from the reliefs of the temple of Amenophis III at Karnak¹ that this vizier served under Menmarē, and we cannot put him back into Year 18 of Neferkerē, even if there ever was such a year, without supposing a change of vizier between that year and the previous year when Khaemwēse held the office (Pap. B.M. 10053, ro., 1. 5). Another very strong reason for placing Wenennefer in the reign of Menmarē is his association in the papyrus referred to with the scribe of the necropolis Dhutmose. This man is dated to the very end of the dynasty by the letters published in Spiegelberg's *Correspondances des rois-prêtres* and others (unpublished at Turin) of the same series. Moreover he is frequently mentioned in Pap. Turin, P.-R. xcvi-xcvii, c-ci, clv-clvii, of which lxx c, which bears the date Year 12 of Menmarē, is actually a part (see above, p. 65). It is therefore difficult to avoid the implication that Wenennefer was vizier in Year 18 of Menmarē, and unless we suppose a change in that year or the next, which would be a remarkable coincidence, Nebmarēnakht cannot have been vizier in Year 19. Coincidences, however, do occur, and one may have occurred here. The trial recorded in Mayer A, B.M. 10052 and 10403 certainly took place some time after the crime, for we have already seen that some of the criminals were dead and that their sons, brought up to bear witness in their place, claim to remember nothing, having been mere children at the time. Now I have pointed out elsewhere that the minimum of time which must be allowed to fulfil these conditions is four to five years, but there is practically no maximum, except that period beyond which it would be impracticable to procure witnesses. What is more, we have little evidence as to the date of the crime, and the placing of it in the reign of Neferkerē, which I confess is the date which I have mentally assigned to it, is quite uncertain. On the evidence of Pap. Mayer A² the attack on the portable chest took place about the period of the war of the high priest Amenhotpe. But when was this war? We do not know. Amenhotpe was still in office in Year 17 of Neferkerē (Pap. B.M. 10068, ro., 4. 1-3), and we do not know how long he continued to be so. All we do know is that in the Year 6 of some king, probably identifiable with Menmarē, Herihor as high priest renewed the burials of Seti I and Ramesses II³. Thus Amenhotpe may have continued in office until this year. His suppression might have occurred as late as this, and Herihor, with his eyes already on the kingship, may have been the suppressor. In this case the Renaissance of Year 19 may have marked a temporary set back in the fortunes of Herihor and a restoration of Amenhotpe and the king⁴. All this is the merest theory, and its only value is perhaps to call attention to the necessity of being prepared to cut ourselves off if necessary from the belief that the suppression of Amenhotpe and the crimes of this trial took place in the reign of Neferkerē.

¹ *Rec. de trav.*, XIII, 173.

² 6. 3 ff.

³ MASPERO, *Les momies royales*, 553, 557.

⁴ The fact that we have a date of the normal type in Year 27 is not fatal to this theory, for the Renaissance dating may have been in use only from Year 19 to Year 24 (= *whm mswt* Years 1-6), after which the ordinary method may have been resumed. If, however, normal datings of the years between 20 and 24 inclusive were to be discovered, they would need a great deal of explaining away.

The results, if such they may be called, of this study may be summed up as follows:

Ramesses III	reigned	32	years	
„ IV	„	6	„	
„ V	„	4	„	at least
„ VI	„	?	„	
„ VII	„	7	„	at least (probably)
„ VIII	„	?	„	
„ IX	„	17	„	at least (possibly 19)
„ X	„	3	„	at least
„ XI	„	27	„	at least
Renaissance		6	„	at least
Total		<u>102</u>		years at least for the dynasty

With regard to the order of these kings we may say :

- (1) That R. IV immediately succeeded R. III is certain.
- (2) R. VI is certainly later than R. IV and R. V, and as there is no trace of any other king at this point the order IV-V-VI seems assured.
- (3) That R. VII immediately succeeded R. VI is highly probable.
- (4) R. VIII cannot be with certainty linked up with either his predecessors or his successors. He is probably later than R. VI (List of Princes), and there seems no place for him after R. IX.
- (5) The order of R. IX, X and XI seems indisputable, but the position of the *whm msut* in relation to these three reigns is very uncertain.

OBJECTS OF TUTANKHAMŪN IN THE BRITISH MUSEUM

BY H. R. HALL

With Plates viii-xi.

The following notes on some objects of Tutankhamūn in the British Museum may be of interest:

1. A copper bowl, or pan (Pl. viii), measuring 17 ins. (43 cm.) on the widest diameter of the lip, 6 ins. (15·2 cm.) diameter of base, and $2\frac{3}{8}$ ins. (6 cm.) high. The lip is therefore greatly splayed, and on one side is depressed and pointed outwards to enable liquid to be poured out; on this depression is engraved the inscription (see Fig. 1).

The signs are well cut; the cartouche enclosed by a double line. The bowl no doubt belonged originally to some temple service of the god Ophois in Lykopolis (Asyût). It is not of bronze, but of copper, with traces of lead; no tin or other metal whatever (analysis by Dr. H. J. Plenderleith, of the British Museum Laboratory). [No. 43040.]

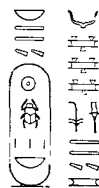


Fig. 1.

“Lord of the Two Lands, *Neb-kheperu-Rē*, beloved of Upuauet, who rules the two lands of the South.”

2. White fayence kohl-tube (Pl. ix, fig. 1), imitating a reed (of the kind seen in No. 51068, also illustrated). On it in manganese-brown (black) are inscribed the prenomen of Tutankhamūn and the name of his queen “the king’s great wife Ankhesenamūn.” (See Fig. 2.) The cut round the tube below the queen’s name is intended to imitate the joint in the actual reed (*cf.* No. 51068). Height 6 ins. (15·2 cm.); diameter $\frac{3}{4}$ in. (2 cm.). [No. 2573.]



Fig. 2.

3. Deep blue fayence kohl-tube of the same reed-type, but plainly cylindrical, without any attempt to imitate the reed-joint (Pl. ix, fig. 2). On it in black is inscribed “Good God, Lord of the Two Lands, Lord of Crownings, *Neb-kheperu-Rē* (Tutankhamūn), given life for ever.” (See Fig. 3.) Height $6\frac{1}{2}$ ins. (16·5 cm.); diameter $\frac{3}{4}$ in. (2 cm.). [No. 27376.]

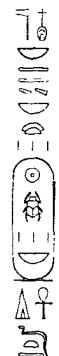


Fig. 3.



Fig. 4.

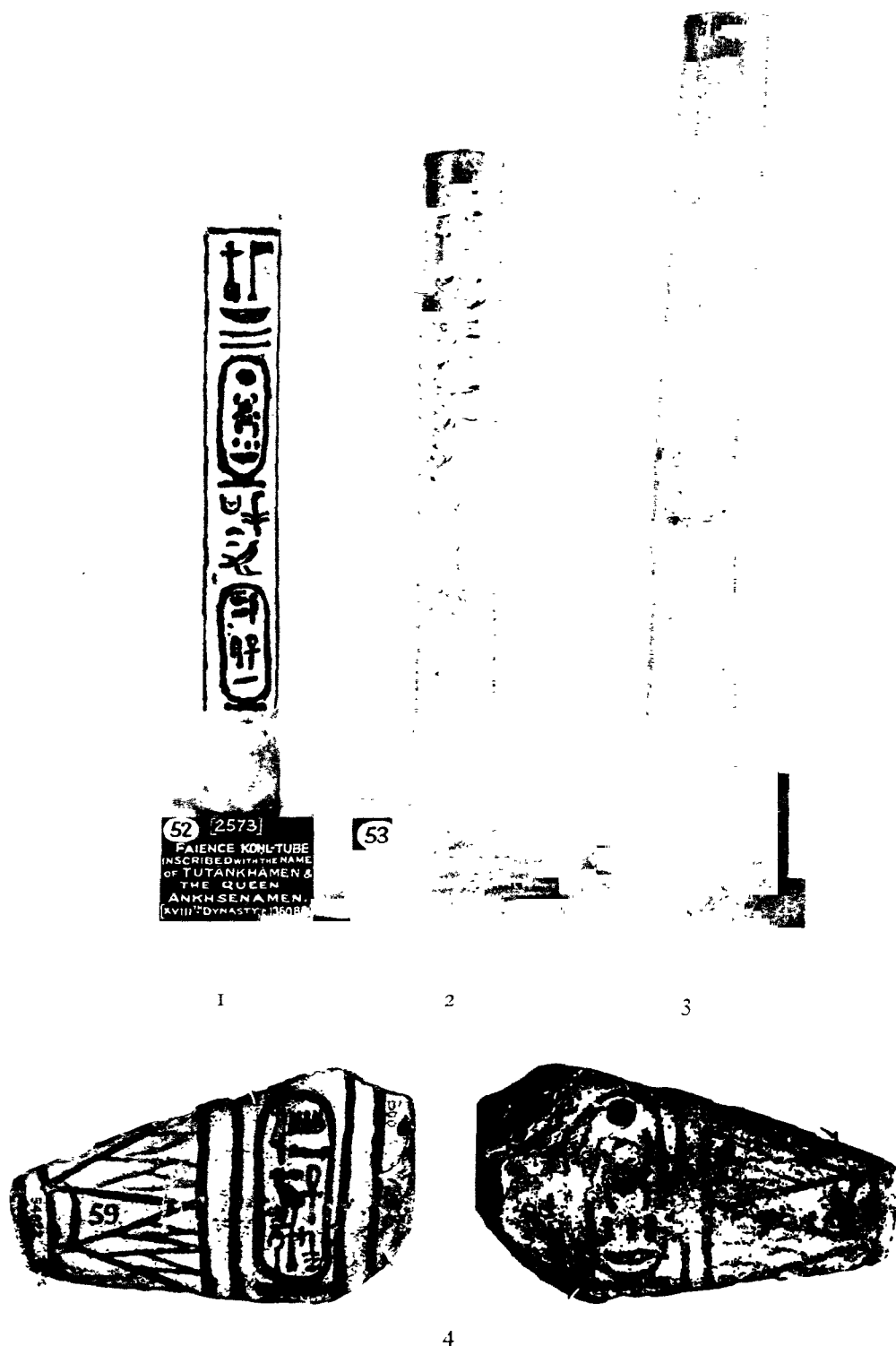
To these is added for purposes of comparison an actual kohl-tube of reed, of about the same date (Pl. ix, fig. 3). The ink inscription, placed between two many-notched year-signs from the ends of which hangs the symbol of gold, ☉ , reads “Eye-paint of Coming-forth behind the Beauties of Eternity.” (See Fig. 4; the sign 𓂏 should be holding two ♀ , with two more hanging from his wrists.) This is probably a funerary object solely, whereas the two fayence tubes were intended for actual use. Height $7\frac{1}{2}$ ins. (19 cm.); diameter $\frac{3}{4}$ in. (2 cm.). [No. 51068.]



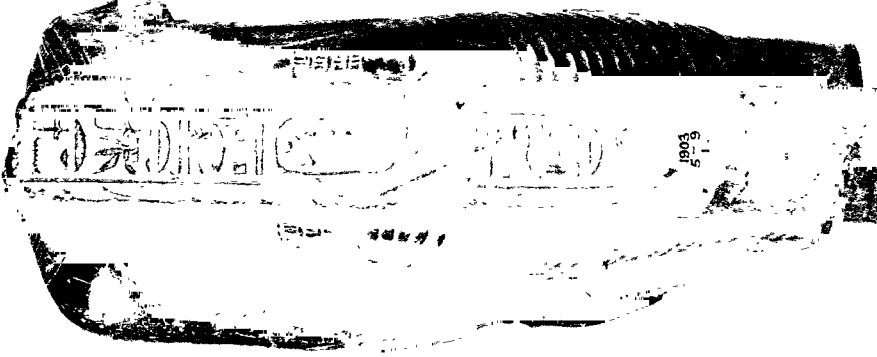
Copper bowl bearing the name of Tut'ankhamūn.

British Museum, No. 43,040.

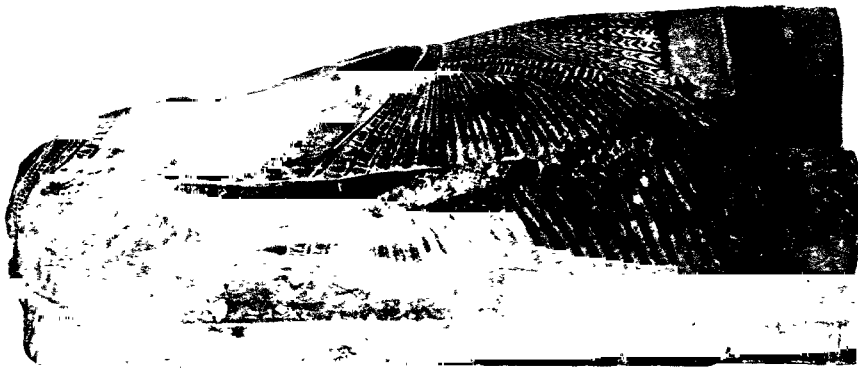
Greatest diameter, 17 inches (43 cm.)



1, 2 Fayence kohl-tubes of Tut'ankhamūn. *Scale* $\frac{1}{2}$.
3 Reed kohl-tube of Eighteenth Dynasty date. *Scale* $\frac{1}{2}$.
4. Fragment of fayence throw-stick of Tut'ankhamūn. *Length*, $3\frac{1}{2}$ inches (9 cm.)
All in the British Museum.



[37639]



Statuette in hard gritstone of Tut'ankhamūn, usurped by Haremhab.

British Museum, No. 37,639.

Scale about 1/3.

4. Blue fayence funerary throwstick of Tutankhamūn: butt-end only (Pl. ix, fig. 4). The rest of the object was broken off in antiquity. It no doubt came from an ancient plundering of the tomb. The object was bought by the late Mr. W. L. Nash many years ago, and was acquired with other objects of his collection in 1920. It was published by him in *Proc. Soc. Bibl. Arch.*, xxxii (1910), 194: Pl. xxix, 45. It is decorated and inscribed with the king's names in the usual form (see Fig. 5), in black. The design is the conventional lily. Length 3 ins. (9 cm.). [No. 54822.]

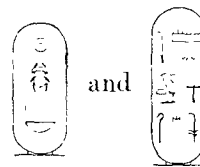








Fig. 5.

5. Trunk, with left arm, of a portrait-statue in hard gritstone, originally of Tutankhamūn, usurped by Haremhab (Pl. x). The legs below the thighs, right arm, and head are missing: the left arm is damaged but the hand complete. The king is holding a standard (damaged). The right arm was anciently knocked off and re-fixed by two pegs, for which the holes still remain. There is a deep gash on the stomach. The king was wearing the helm , the *infulae* of which are shown in relief hanging at the side of the plinth. He wears a multiple necklace and a gauffred linen kilt, from the cincture of which hangs an "apron" of feather-work (!), at the end of which was something in inlay of another material which is lost, leaving the rectangular hole for it empty. In the middle of the cincture is cut very small. . "Neb-kheperu-Rē", beloved of Amen-Rē." On the sceptre or staff is cut in equally tiny hieroglyphs the beginning of the royal titulary (see Fig. 6)¹, ending with  beneath a cartouche which is quite illegible and has probably been usurped and then erased again. The inscription on the back of the plinth reads as Fig. 7. The group  (*sic*) is the first on the label, as it is right up at the base of the neck of the figure, and the plinth cannot have gone any higher: in fact the cross-bar of the top of the "label" is visible in the photograph. It therefore presumably means "King and Lord," an unprecedented title before the *Insibya*, . The usurpation by Haremhab is childishy clumsy, as may be seen from the photograph. The signs  below the cartouche are a restoration by Haremhab.

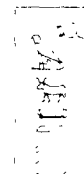


Fig. 6.

These usurpations are so wretched that they can hardly be regarded as anything else than the work of an absolute beginner, who was presumably stopped or gave up the job after he had tried unsuccessfully to cut the cartouche and a few signs, which are, however, enough to tell us the name of the king in whose reign Tutankhamūn's name was erased. The mending of the arm (substitution of a new one, now missing) looks as if it dated from the same time.

The original hieroglyphs are well cut, and the work of the statuette itself excellent, showing typical traits of the 'Amarnah period, with slack abdomen, broad hips and shoulders, accentuating the narrowness over the ribs, beneath the rather full breast. It measures 11 $\frac{3}{4}$ ins. (30 cm.) in height and was originally 5 in. (12.7 cm.) broad at the shoulders: the plinth is 1 $\frac{5}{8}$ in. (4 cm.) wide, broadening slightly towards the missing base.

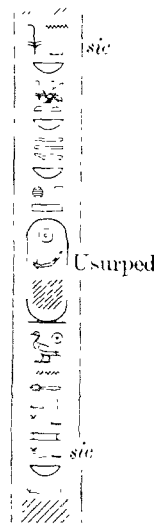


Fig. 7.

The figure was given by W. McOran Campbell, Esq., in 1903. [No. 37639.]

For comparison with it I publish (Pl. xi) a smaller headless figure of much the same

¹ The falcon wears the double crown and has a \ddagger sign at his feet.

kind, in steatite, of Amenophis III, the inscription of which, on the plinth behind, has been erased with a view to an usurpation, which has, however, never been carried out. The only signs of the inscription visible are the three first (see Fig. 8), while further down can just be made out the three symbols of the king's prenomen (see Fig. 9) in a cartouche which has gone. The figure carries the crook of Osiris in the right hand: the hanging left arm holds an uncertain object like a knot or short "sash," which may be a "sacral" knot like that held by the funerary statue of Menkheperresenb (see p. 1), which so much resembles the "sacral knot" of the Minoan Cretans. The treatment of the body is reminiscent of that of No. 37639, showing the fleshy abdomen and broad hips, which are characteristic of the end of the Eighteenth Dynasty and especially of the 'Amarnah period. The dress is rather different, the apron having the two urai at the sides and being represented apparently as of bead-work, not feathers. This figure was funerary in character, as we see from the inscription. It belonged to the Salt Collection of 1835, and measures $5\frac{1}{2}$ ins. (14 cm.) in height. [No. 2275.]


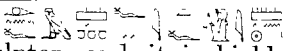

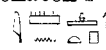



Fig. 8.

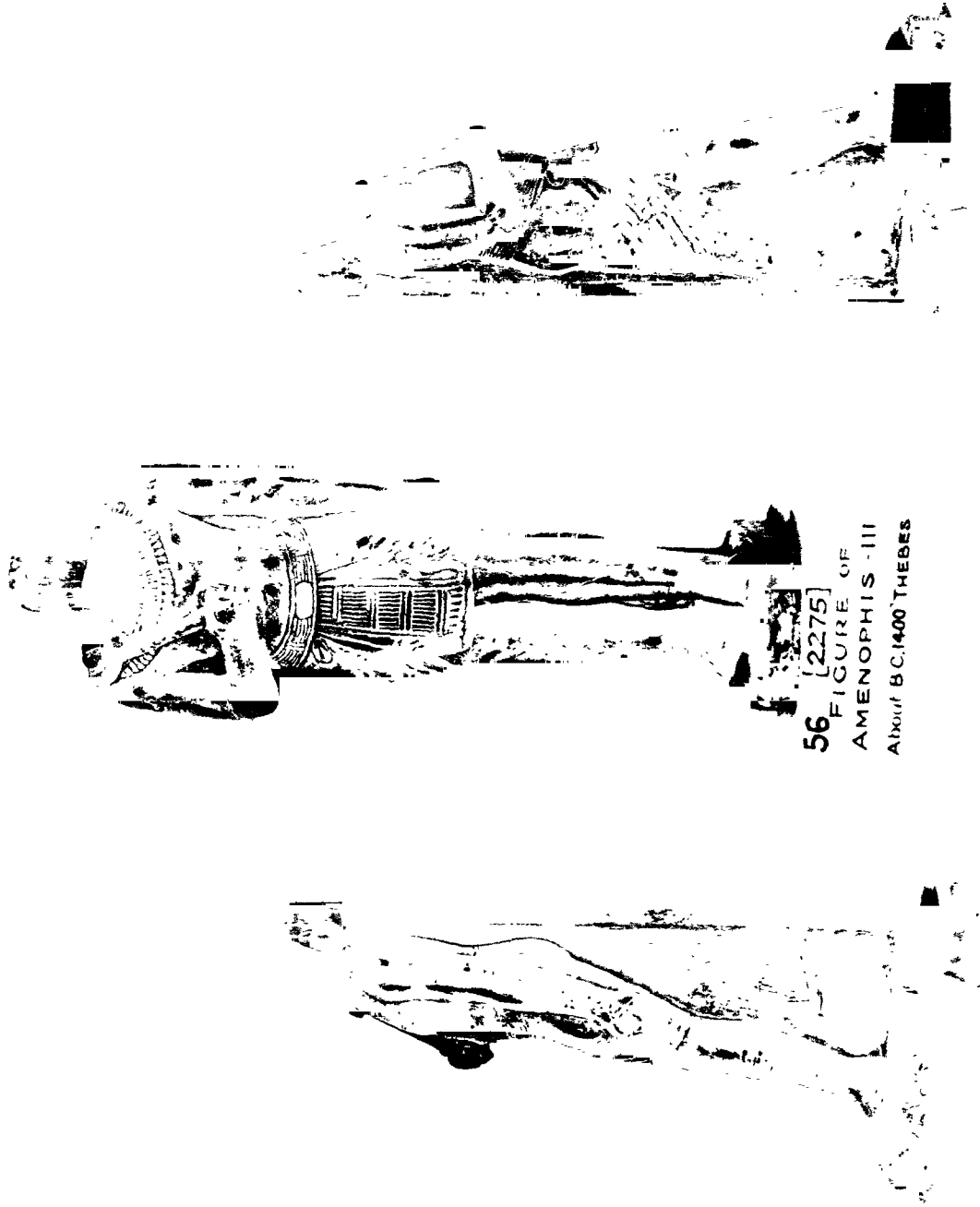


Fig. 9.

Of the above objects Nos. 2, 3, 4 (more especially the last) were probably among the objects in the king's tomb, and No. 1, the bronze bowl, may also have belonged to it in spite of its Lykopolite inscription. They must have left it as the result of some ancient plundering, proof of which is seen in the objects of Tutankhamun and Iye (Ai) found by Harold Jones in the Biban el-Muluk in 1907, in a rock-cut chamber that at first was taken to be the tomb of Tutankhamun, since Iye's was well known as the *Turbat el-Kurud* in the west valley¹. All, with the exception of No. 37639, were bought, and have been in the Museum for many years.

I have not included the "Prudhoe" lion of red granite in the Egyptian Sculpture Gallery (No. 2; ex 34), which bears Tutankhamun's name, in this list, because I regard this as certainly if not an usurpation at any rate an "addition" on his part, for both the lions (Nos. 1 and 2) undoubtedly belonged to Amenophis III and were set up by him at Sulb (Soleb), whence they were removed to Gebel Barkal by the Ethiopian Amonisru, who also inscribed his name upon them. Tutankhamun merely added an inscription to one of them, recording his restoration of the monuments of his father Amenophis III, , "which he (Amenophis) had made as his monument for his father, Amon-Rec" . Both lions seem to me to be undoubtedly by the same sculptor, and it is highly improbable that Amenophis set up only one of them, and Tutankhamun later on the other in exact imitation of it. Also this would not be , which usually means chiefly the restoration of inscriptions. I think that both lions were set up by Amenophis as a pair, as it is natural to suppose, and that Tutankhamun merely restored his father's inscription on one of them, which had got battered in the Atenist iconoclasm, when Amenophis' inscription on the other lion was considerably knocked about, but was not restored by Tutankhamun. There is no restoration by Tutankhamun of the inscriptions of the other lion (No. 1), as BREASTED, *Anc. Rec.*, 896 (II, 363) implies: Tutankhamun's inscription is on No. 2 only. On No. 1 the inscription of Amenophis remains, with a record of Akhenaten's vandalism in the battered second cartouche of his father, in which the name  has been roughly replaced in Akhenaten's peculiar manner by a repetition of the throne name , in which the middle signs are practically invisible. BREASTED (*op. cit.*, 364, n. c) assigns this restoration to

¹ THEO. M. DAVIS and DARESSY, *Tombs of Harnhabi and Touatankhamanou*, 1912, 2, 3, 125 ff.



56 [2275]
FIGURE OF
AMENOPHIS - III
About B.C. 1400 THEBES

Statuette in steatite of Amenophis III. British Museum, No 2275.
Height 5½ inches (14 cm.)

Tutankhamūn: but when Tutankhamūn restored his father's monuments at Šulb he had reverted to Amenism, and would have spelt out the name Amenophis properly as in his inscription on No. 2; whereas Akhenaten actually did use a repetition of *Neb-maʿat-Rē* as his father's nomen after his death, so that the two cartouches *Neb-maʿat-Rē* stand side by side, as we see in the British Museum stele No. 57399, found at 'Amarnah by the Society's expedition of 1923-4, on which the dead Amenophis is represented with Tiye and described as in Fig. 10. This stele was certainly made under Akhenaten¹.

I regard the filial relationship of Tutankhamūn to Amenophis III as proved by this inscription, in default of any evidence to the contrary, and in my *Ancient History of the Near East* (1913), p. 308, I wrote that he "was probably a son of Amenophis III by an inferior wife." In view of the close personal likeness between Tutankhamūn and Queen Tiye, pointed out in the *Illustrated London News*, Jan. 1, 1927, I should now be inclined to think it more probable that he was her son, and that therefore he and Akhenaten were own brothers, although he was much younger than Akhenaten. The fact that Tutankhamūn married his niece, Akhenaten's daughter, is no bar to this conclusion, in ancient Egypt. Mr. Glanville, in an article to be published in Parts III-IV of this *Journal*, notes personal resemblances between Tutankhamūn and Amenophis III which confirm this view. If we suppose that Akhenaten proclaimed his adherence to the "doctrine" immediately after his father's death, and that therefore he was associated with Amenophis up to his fifth year at least, he will have died, after a reign of seventeen years, eleven or twelve years after his father. Smenkhkerē probably overlapped both Akhenaten and Tutankhamūn in his three years' reign², so that Tutankhamūn, who probably did not reign more than six years, may, if he died at the age of eighteen or nineteen (as the examination of his mummy shows)³, quite easily have been the son of Amenophis III, even if he were not born posthumously.

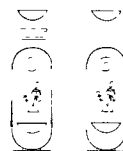


Fig. 10.

¹ GRIFFITH, *Journal*, XII (1926), 2.

² For the reign of Smenkhkerē there is no doubt whatever from the evidence of fayence ring-bezels, etc., that this is the correct form, and that "Scaakerē" ("S-G-k-R") is a modern mistake, see NEWBERRY, in the current *Journal*, pp. 5-6.

³ CARTER, *Tomb of Tutankhamen*, II, 160.

THE NEW PTOLEMAIC PAPYRUS CONTAINING
PARTS OF *ILIAD*, XII, 128-263

BY G. M. BOLLING

The British Museum possesses a papyrus (Inv. No. 2722A) that has recently been published by Mr. H. J. M. Milne as No. 251 in his *Catalogue of the Literary Papyri in the British Museum*, App., 210-11. Thanks to his kindness and that of Mr. H. Idris Bell (both have also been so good as to answer a number of my queries) I have seen a proof of this publication, and wish to attempt a reconstruction of its text, and to stress the importance of its evidence about the earlier tradition of the Homeric poems.

The papyrus is assigned by its editor to the second century B.C., and is to be classed, I should say, with P. Hibeh 20 and P. Jouguet as representatives of a type of text distinct both from the "wild" Ptolemaic texts and from the later Vulgate. The unique character of the Hibeh papyrus was recognized by its editors immediately upon its discovery, and their judgment has been confirmed by the coming to light of a second and third specimen. If my suggestion¹ that the "City" editions are in reality texts of this, or a closely related, type shall prove tenable, the importance to be attributed to these papyri will increase greatly. All three types of text seem, however, to rest upon the same foundation, which may be called the Old Vulgate, to avoid terms such as Attic or Pisistratean text, that would raise other issues. Their differences come from the fact that they have all been interpolated but in different ways and to different degrees.

Of the verbal variants² the most important is $\pi\lambda\epsilon[v]\mu\omicron\nu\iota$ in line 188^b. The word occurs twice (*Il.*, iv, 528, xx, 486) in the Vulgate; both times in the same phrase as here. The mss. all read $\pi\nu\acute{\epsilon}\mu\omicron\nu\iota$, but there is also indirect evidence for $\pi\lambda\acute{\epsilon}\mu\omicron\nu\iota$ that reaches us through Photius and Eustathius, beside a statement of Moeris that $\pi\lambda\acute{\epsilon}\mu\omega\nu$ is the Attic, $\pi\nu\acute{\epsilon}\mu\omega\nu$ the Hellenistic form. Confronted with this conflicting evidence editors (except Nauck and Fick) have regularly played safe and followed the manuscripts. Linguists, however, have seen that $\pi\lambda\acute{\epsilon}\mu\omega\nu$ must be the older form; if for no other reason³ because of the ease with which $\pi\nu\acute{\epsilon}\mu\omega\nu$ can be explained as due to popular etymology; and Wacker-

¹ *The External Evidence for Interpolation in Homer*, 37-41. Oxford: Clarendon Press, 1925. The separate position of P. Hibeh 20 was questioned by GERHARD, *Ptolem. Homerfr.*, 4.

² 129. $\pi\omicron\lambda\upsilon[\kappa\omicron\pi\omicron\iota\eta\nu]$ a miscopying of $\pi\omicron\lambda\upsilon\kappa\omicron\iota\eta\nu$? 178. $\alpha\chi\nu\upsilon\mu\epsilon\nu[\eta]$ $\pi\epsilon\rho$ $\alpha\nu\alpha\gamma\kappa\eta$ by false concord; on omission of -ι, cf. GERHARD, *op. cit.*, 20, n. 3. 188^a. $\upsilon\rho\zeta\mu\upsilon\eta[v]$ for spellings such as $\upsilon\zeta\mu\upsilon\eta$ cf. BRUGMANN-THUMB, *Griech. Gram.*, 147; and note the efforts to designate the length of the sibilant by -σζμ-, -σσμ- in HERMANN, *Silbenbildung*, 118. One may think more remotely of Cretan $\kappa\acute{\omicron}\rho\mu\omicron\iota$, cf. BECHTEL, *Griech. Dial.*, II, 706. If the spelling is more than a graphic blunder (from $\upsilon\rho\mu$ -?) something like [ř.m] would seem to be intended. 250. $\alpha\psi\alpha\kappa$ $\epsilon\mu\omicron\iota$: $\alpha\upsilon\tau\acute{\iota}\kappa'$ $\acute{\epsilon}\mu\acute{\omega}$ Vulg.; no interchange elsewhere in the *Iliad* is reported by Ludwich.

³ But cf. the etymologies given *s.v.* by BOISACQ and by WALDE, even if they are not free of difficulty. For material, cf. KUEHNER-BLASS, *Griech. Gram.*, I, 73.

nagel¹ accordingly pointed to the behaviour of the MSS. as indicating nothing but the influence of Hellenistic speech upon the Homeric tradition. The discovery of a copy, older than all others, that reads *πλεύμονι*, should now turn the scales even for the most conservative. Incidentally, too, it settles the form of Alcaeus's *τέγγε πλεύμονας ὄνφ* where the last editor, Lobel (108), has chosen more wisely than his immediate predecessor Diehl (91) between similar variants. The discovery of this papyrus thus yields an item that may be added to the list² of instances in which modern scholarship has been similarly confirmed.

Turning now to the larger issues: the first fragment contains the ends of lines 128-36 in agreement with the Vulgate, but in the opinion of the editor "the lines following appear to differ from the usual text." There is little from which to form an opinion, but the shortness of line 137 (33 letters) seems consistent with the fact that the end of the corresponding line did not reach the extant strip of papyrus. Then the next line, in which only]*μα.α*[can be read, probably differed merely by having something like *κελαδφ μάλα πολλῶ* for *μεγάλω ἀλαλητῶ*.

The third fragment containing the beginnings of verses 249-63 offers much the same aspect. For lines 254-5 the editor suggests that there were "apparently new lines supplanting the MSS. tradition"; and again I think that it may be sufficient to assume no more than verbal variants³, such as:

ἦ δὲ κ[ατὰ νηῶν κοινήν φέρειν· ἀντὰρ ἔθελγε
θυμὸν Ἀ[χαιῶν Τρωσὶ καὶ Ἐκτορι κῦδος ὀπάζων.

The column contains also one plus verse (250^a) at the close of Hector's speech to Polydamas. The context leaves little doubt that it must⁴ have begun *ἀλλ' ἔπ[εο*. It can be completed on the pattern of any one of three lines:

πτόλεμον δ', οἶος πάρος εὔχεται εἶναι cf. *Il.*, IV, 264.
πτόλεμον δὲ καὶ ἄλλους ὄρνυθι λαούς XIX, 139.
ἄφρ' ἐπὶ νηυσὶ συνώμεθα ποντοπόροισι XIII, 381.

Precisely which one does not matter much, as the line will be in any case an interpolation. I favour the first, because it is from the book from which this text draws other interpolations.

So far, then, we have a text that in its lines agrees closely with the Vulgate; but in the second fragment the case is quite different. On it can be read the ends of 18 lines, and I shall try to show that another has been skipped haplographically. To 17 (18?) of these correspond verses 176-92 of the Vulgate. There is thus an excess of at the most one line on the part of the papyrus; and if, as seems most probable, lines 193-4 were not in it, even this is more than offset. However as six (or seven) lines are entirely different from those of the Vulgate, the variation of the two texts is much greater than the mere number of lines would indicate.

Fortunately the new text can be restored, in substance at least: I would not insist, of course, upon the verbal details of my reconstruction. With line 175 prefixed it must have read:

¹ *Sprucht. Unters. zu Homer*, 74 = *Glotta*, VII, 234 (1916).

² CAUER, *Grundfr. d. hom. Kritik*, 24 ff.; GERHARD, *op. cit.*, index s.v. "Konjekturen."

³ For lengthening before *νηῦς Il.*, XIII, 742 is said to be the only parallel. Perhaps *νηῶν* was actually written, cf. GERHARD, *op. cit.*, 106 on such doublings.

⁴ On the spelling cf. *Class. Phil.*, XVIII, 170-7 (1923); and on *ἐκ πλήρους* writing in papyri GERHARD, *op. cit.*, 20, n. 1.

- 175 ἀλλοι δ' ἀμφ' ἄλλησι μάχην ἐμάχοντο πύλῃσιν·
 ἀργαλέον δέ με ταῦτα θεὸν ὧς] πάντ' ἀγορε[ύσαι.]
 . πάντη γὰρ περὶ τείχος ὀρώρει θε]σπιδαῖς πῦρ
 λάϊνον· Ἄργεῖοι δέ, καὶ ἀχνύμεν]οί περ, ἀνάγκη
 179 νηῶν ἠμύναντο· θεοὶ δ' ἀκαχεί]ατο θυμόν·
 179^a Ζεὺς γὰρ Τρῶας ἔγειρε καὶ Ἔκτορα] κῆδε δ' Ἀχαιοῦς.
 181 σὺν δ' ἔβαλον Λαπίθαι πόλεμον κα]ῖ δῆιοτήτα.
 182 ἐνθ' αὖ Πειριθόου υἱός, κρατερὸς Πολ]υποίτης
 183 δουρὶ βάλεν Δάμασον κυνέης διὰ] χαλκοπαρήου·
 183^a κόρσην· ἢ δ' ἑτέροιο διὰ κροτάφοιο] πέρησεν
 183^b (αἰχμὴ χαλκείη· τὸν δὲ σκότος ὅσσε κάλυψεν.)
 188 υἱὸν δ' Ἀντιμάχοιο Λεοντεύς, ὄξο]ς Ἄρῃος,
 189 Ἴππόμαχον βάλε δουρὶ κατὰ κρα]τερὴν ὑσμίνη[ν]
 189^a στέρνον ὑπὲρ μαζοῖο, πάγη δ' ἐν] πλε[ύ]μονι χαλκ[ός·]
 189^b δούπησεν δὲ πεσών, ἀράβησε δὲ τεύχε' ἐπ' αὐτῷ.
 190 αὐτίς δ' ἐκ κολεοῖο ἐρυσσάμενος ξί]φος ὄξυ
 190^a υἱὸς ὑπερθύμοιο Κορώνου Καινεῖδ]αι
 191 Ἀντιφάτην μεγάλθυμον, ἐπαῖ]ξας δι' ὀμίλου,
 191^a τύψε κατὰ κληῖδα παρ' αὐχένα,] λῦσε [δὲ γυῖα.
 195 ὄφρ' οἱ τοὺς ἐνάριζον ἀπ' ἔν]τευα, τόφρ'] αἰζ[ηῶν
 195^a (δήιον ἐς πόλεμον πυκινὰ κίνυ]ντο φάλαγγες κτλ.)

178. ἀχνύμεν]η, ἀνάγκη. 183. χαλκοπαρήου. 183^{ab}. *Il.*, IV, 502–3. 189. υρξμνη[ν].
 189^a. *Il.*, IV, 528. 189^b. *Il.*, IV, 504. 190^a. *Il.*, II, 746, XII, 130^a in §T. On re-examination *a* is more
 probable than *λ*. 191. Ἄ. μὲν πρῶτον vulg. 191^a. Cf. *Il.* XXI, 117. 195. Cf. *Il.*, XV, 343 (for the
 transition) and IV, 280. 195^a. *Il.*, IV, 281. The line equivalent to 196 probably began with ἀλλά.

The first point of interest is the presence of the interpolated lines 175–81 that were not in the text of Zenodotus. In view of the date of the papyrus this is not surprising; we may compare the presence of *Il.* II. 674 (perhaps also that of II, 724) in P. Hibeh 19, and the similar behaviour of the “City” editions¹. The interpolation now proves not to have been made in one jet; for line 180 is to be judged even later than its fellows διὰ τὸ καὶ ἑτέρως φέρεσθαι, to quote Didymus’s formulation of an Aristarchean principle.

Then follow three battle vignettes, each told in four lines and each ending with a familiar formula τὸν δὲ σκότος ὅσσε κάλυψεν, ἀράβησε δὲ τεύχε' ἐπ' αὐτῷ, λῦσε δὲ γυῖα. This symmetry² is a strong justification for the addition of 183^b that is needed to explain the pronoun of the preceding line, and could easily have been dropped accidentally because of the homoioteleuton.

The second of these vignettes consists in the Vulgate merely of two lines (188–9) and is clearly the original text. We can see how its close κατὰ ζωστήρα τυχήσας, which corresponds to the κυνέης διὰ χαλκοπαρήου (183) of the preceding vignette, has been changed to the colourless κατὰ κρατερὴν ὑσμίνην to permit the addition of two plus verses borrowed from the fourth book. Correspondingly we have for the first vignette two lines (182–3) common both to the papyrus and to the Vulgate. Only this time each text has expanded the original in its own fashion: the papyrus taking its verses from IV, 502–3, the Vulgate its from XX, 398–400.

Between the two stands in the Vulgate a single line (187) in which Pylon and Ormenos are slain by Polyposes. The possibility that it too was dropped haplographically from the

¹ Cf. my *Extern. Evid.*, 40 and at the passages cited.

² On tendencies to symmetry in papyrus texts, cf. GERHARD, *op. cit.*, on *Il.*, XXIII, 154.

papyrus must not be overlooked. I do not, however, consider this probable: because its presence would upset the symmetry observed. If it was not present in the papyrus it is most unlikely that the corresponding lines (193-4) were contained in that text, and so far it has not been possible to reconcile with their presence the slight traces in the papyrus. On the contrary I have been able to reconcile them with the close of 195, and it is to be noticed that the borrowing is once more from the fourth book. Without lines 193-4 *μὲν πρῶτον* in 191 is impossible, and some epithet (not necessarily the one I have chosen) must be substituted.

The third vignette differs considerably in the two texts: and, what is more, there is no portion common to both that can be picked out as the original. This in itself is strongly suggestive of an interpolation *διὰ τὸ καὶ ἑτέρως φέρεσθαι*. The purpose of the Vulgate is clear. An original balance of two lines for the deed of each hero had been upset by expanding that of Polypoites to five lines: a balance was restored by adding a second exploit of Leonteus told in three lines patched together from phrases found in xiv. 496 (xx, 284, xxi, 116), xvii, 293-4, vii, 145. The papyrus has taken this interpolation and reworked it into its own four-line pattern, but without any more originality.

I should posit therefore for the Old Vulgate:

- 182 ἔνθ' αὖ Πειριθόου υἱός, κρατερὸς Πολυποίτης,
 183 δουρὶ βάλειν Δάμασον κυνέης διὰ χαλκοπαρήου.
 188 υἱὸν δ' Ἀντιμίχοιο Λεοντεύς, ὄζος Ἄρηος.
 189 Ἰππόμαχον βάλει δουρὶ κατὰ ζωστήρα τυχήσας.
 193 ὄφρ' οἱ τοὺς ἐνέριζον ἀπ' ἔντεα κτλ.





This text has, I think, an advantage. For the two Lapiths to be spoiling of their weapons the two Trojans who have fallen beneath their spears is perfectly in order: the later Vulgate, however, makes them despoil eight men, and for this I can recall no parallel.

The tradition has been in two currents, and may be described with some over-simplification as follows. In the first, the one that leads to the papyrus, each vignette was expanded by the addition of verses 183^{ab}, 189^{ab}: meanwhile in the other verses 184-6, 190-2 had been added. Then the currents cross, this last interpolation (190-2) making its way into the other stream of tradition and being there assimilated. Afterwards verses 187 and 193-4 made their appearance in the current that ends in our Vulgate.

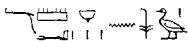
The papyrus can show one other thing, though that but dimly. The editor, on the tacit assumption that there was no increment between verses 128 and 176, could calculate that the columns contained 24 lines. Then between Fr. 2 and Fr. 3 either one column is missing, and between lines 195 and 219 there is a minus of 14 verses¹: or two columns with a plus of 10 verses are lacking. In view of the general character of the text, the former seems much the more likely supposition. Of course the calculation can be changed by modifying the primary assumption, and operating with a column of different length. It seems, therefore, unprofitable to pursue the topic further.

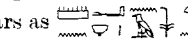
The papyrus illustrates again the truth that the value of these early texts will lie not in the extra lines they bring us, but in their refusal to attest lines that have hitherto appeared well established.

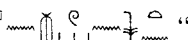
¹ Before lines 254-5 stand ends from a lost column :] .v.]z. These, if Vulgate lines, would seem to be 220, 219; then at least three of these "minus" verses stood before line 218. That the "plus" verse 219 should appear thus misplaced is nothing surprising.

was also a "royal scribe," and "steward"; his name has unfortunately been destroyed. Davies, no doubt rightly, attributes the tomb to the earlier half of the reign of Amenophis III, for in it the king's mother is enthroned with her son. But it is remarkable that no queen of Amenophis III is mentioned in the inscriptions, although there are at least four children whom Davies considers to be children of Amenophis III. The names of two of these children have been partly preserved, as will be seen from the reproduction of my tracing of the original fragments of the inscriptions above the boys (see Fig. 1). The first name perhaps read  ; the second  ; no trace remains of the third. Were there no other evidence, we might perhaps grant Davies's surmise that Akheper(u)rē was a son of Amenophis III.


II. Inscriptions in Tomb No. 64 at Thebes name two court officials—(1) Hekreshu¹, who was "Tutor of the king's eldest son Tuthmosis-Khaḥkhaḥw (*i.e.*, Tuthmosis IV), and (2) Hekernehēh, who was "Tutor of the king's son Amenophis," and "tutor of the king's children²." The tomb is dated in the reign of Tuthmosis IV who, in two scenes, is depicted giving audience to his nobles. On the right-hand inner wall of the vestibule there is an important scene³ which shows Hekreshu seated on a chair with the king's eldest son Tuthmosis-Khaḥkhaḥw upon his knee. This boy has the uraeus upon his forehead, holds in his right hand the heḳ-sceptre, wears a pectoral inscribed with the prenomen of Tuthmosis IV, and under his feet is a stool upon which nine prostrate prisoners are depicted. Above the seated figure of Hekreshu was an inscription⁴ giving his name and titles (see Pl. xii); he is here described as "tutor of the king's son the eldest of his body⁵, Tuthmosis-Khaḥkhaḥw." Above the young prince were three vertical lines of

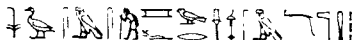


divers, Pl. 36, g; or  "overseer of the tutors of the king's son," which is found on a shawabti figure of Huy, Cairo, No. 46548, from Abydos, see *Journal d'entrée*, 4438. It is possible that the Theban Tomb No. 226 may be that of the tutor Hekernehēh who, in the reign of Amenophis III's predecessor Tuthmosis IV, prepared for himself Tomb No. 64 which is mentioned below.

¹ Hekreshu appears as  on a statuette of the king's son Tuthmosis which was found by Miss Benson in the temple of Mut at Karnak; I have published the inscriptions upon it in BENSON-GOURLAY, *The Temple of Mut*, 328-329. GAUTHIER, *Le livre des rois*, II, 303, makes this king's son Tuthmosis a son of Tuthmosis IV, but from the data given in the present paper he is certainly to be identified with King Tuthmosis IV himself.

² The title  "tutor of the king's children" appears on one of Hekreshu's funerary cones.

³ This is given by L., *D.*, III, Bl. 69, but some important details have been omitted. A pencil drawing of Hekreshu with the young prince upon his lap was made by James Burton in the late twenties of last century, and is now preserved among the Burton MSS. in the British Museum (*Add. MS.* 25644, f. 13, 14). The uraeus is clearly seen in this early drawing. Champollion has described the scene in his *Notices descriptives*, I, 863.

⁴ The inscriptions have been restored from Burton's copy; the first  in the cartouche, omitted by Burton, is given in CHAMPOLLION, *Notices descriptives*, I, 863. The scene was badly damaged before 1844 when Lepsius made his drawing. Describing the pectoral, Champollion says that it bore the name of the prince's father; he, therefore, thought that the young prince was a son of Tuthmosis IV and not Tuthmosis IV himself.

⁵ On a Canopic jar described by Daressy (*Rec. de trav.*, XIV, 174) a  is mentioned. Daressy supposed that this prince was a son of Tuthmosis IV and identified him with the  of the Sphinx Stela; but the  of the Sphinx Stela was certainly Tuthmosis IV himself, see ERMAN, *Sitzb. K. A. Berlin*, VI, 428-37. GAUTHIER (*Le livre des rois*, II, 336) makes the king's son Tuthmosis of the Canopic jar-box a son of Amenophis III, but there is no evidence at all for this.

inscription; here he is called "the king's eldest son Menkheperurē"; this name, which appears also on the pectoral that the young king wears, is, of course, the premen of Tuthmosis IV, and he is here further described as "Lord of the Two Lands."

Behind the young sovereign and facing Ḥekreshu is figured the "king's son Amenophis," with his tutor Ḥekerneḥēḥ. Above them are seven lines of inscription (see Pl. xii). In front of the prince are the words "king's son of his body," but the name, which was obviously Amenophis, has been destroyed. This young king's son is shown wearing the side-lock, and he had suspended from his neck a pectoral inscribed with the premen and nomen of Tuthmosis IV; a drawing of this pectoral is given by Champollion and is reproduced in Fig. 2. The prince holds in one hand a bouquet of flowers and in the other a sprig of green leaves. This little prince, there can be no doubt, was Amenophis, the son of Tuthmosis IV by Queen Mutemwia¹, who succeeded his father on the throne of Egypt and was later known as Nebmarē Amenophis III.

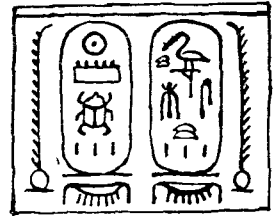


Fig. 2.


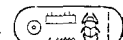
Behind Ḥekerneḥēḥ were depicted probably six² young princes arranged in three rows of two each, but the whole of the second row is broken away and the names of all the princes except one have disappeared. The first in the upper row wears a pectoral upon which is the premen of Tuthmosis IV and before him is the legend "the king's son of his body, Amenemḥēt." This young prince is known to us from another source, for his Canopic jars (and perhaps his body) were found in the tomb of Tuthmosis IV in 1903³; from this fact we may surmise that he predeceased his father.

III. The names of the royal tutors Ḥekreshu⁴ and Ḥekerneḥēḥ⁵ appear on other monuments besides Tomb No. 64 at Thebes. On the rocks of the Island of Konosso in


¹ That Nebmarē Amenophis III was a son of Tuthmosis IV by Mutemwia is certain from an inscription in the temple at Luxor (GAYET, *Le temple de Louxor*, Pl. lxxi, fig. 205).

² GAUTHIER, *Le livre des rois*, II, 290, note 1, says "on voit six princes, disposés deux à deux sur trois registres superposés, qui sont probablement des frères de Tuthmosis IV; leurs noms sont détruits, et souvent aussi leurs images."

³ CARTER-NEWBERRY, *The Tomb of Thoutmosis IV* (ed. Theodore Davis), 6-7, Nos. 46037-46039. The body of the boy was found in one of the chambers of this tomb (*op. cit.*, Pl. x, fig. 3).

⁴ Besides the inscriptions naming Ḥekreshu mentioned in the text of this paper I should note the following: (1) A statuette of the king's son Tuthmosis found by Miss Benson in the temple of Mut at Karnak; the inscriptions upon it have been published by me in BENSON-GOURLAY, *The Temple of Mut*, 328-329. I originally thought that this "king's son Tuthmosis" must be a son of Tuthmosis IV (BENSON-GOURLAY, *op. cit.*, 328, n. †), but it is now certain that he ought to be identified with the young Tuthmosis (*i.e.*, Tuthmosis IV) who is depicted seated on his tutor's knee in Tomb No. 64 at Thebes. I know of no evidence for a son of Tuthmosis IV bearing the name Tuthmosis. The cartouche above the graffito on a rock in the island of Sehel (L., *D.*, Text IV, 125; J. DE MORGAN, *Catalogue I*, 90, No. 84) which names a  was examined by Mr. Winlock and myself in 1926, and again by me in 1927, and it does not read  as given by de Morgan. (2) Three shawabti figures found by Petrie at Abydos

(*Royal Tombs I*, 33; MACIVER-MACE, *El Amrah and Abydos*, Pl. xxxix, 3 and 4); these are now in the Cairo Museum (Nos. 48329-30). (3) Four graffiti at Konosso; PETRIE, *Season*, Nos. 21, 23, 39, 44.

⁵ Other monuments than those mentioned in the text which name Ḥekerneḥēḥ are (1) A statuette representing the tutor kneeling and holding before him a stela, found when clearing out the tomb in 1899. (2) Many funerary cones from his tomb. (3) Two shawabti figures found in the Biban el-Mulūk and now in Cairo (46536); *cf.* MARIETTE, *Monuments divers*, Pl. 36, f and g. The inscription upon one of these gives the name of Ḥekerneḥēḥ's mother  Ment.



Scene from the vestibule of Tomb No. 64 at Thebes.
Prince Tuthmosis-Kha'kha'u on the knee of his tutor Hekreshu.

the region of the First Cataract, there is a group of graffiti which date from the reign of Tuthmosis IV. One of these (see Fig. 3) names the "favoured of Amenr̄c, the divine father, H̄kreshu," together with two young princes, "the king's son Amenophis." and the "king's son Akheperur̄c".¹ There can be no doubt that the H̄kreshu here mentioned

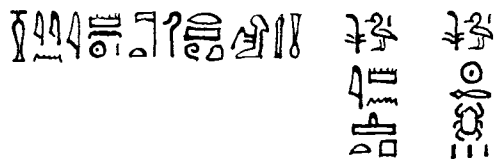


Fig. 3.


is the same person who is figured in Tomb No. 64 at Thebes, for he bears in both places the title Divine Father, and he appears in both places with the prince Amenophis. Another graffito² at Konosso (see Fig. 4) names the king's first herald R̄c, the king's sons Amenophis and Akheperur̄c, and the H̄kerneheh. Here again the tutor bears a title which is also found in Tomb No. 64 at Thebes and he must be the same person who was buried in the cemetery of the capital. The tomb of the king's first herald R̄c is at Thebes (No. 201), and it certainly dates from the reign of Tuthmosis IV. A superb model sarcophagus inscribed with the titles and name of R̄c is in the Cairo Museum and perhaps came from Tomb No. 201 at Thebes.



Fig. 4.

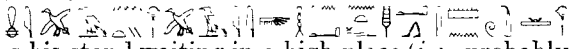
On the evidence of these Cataract graffiti combined with that of the inscriptions in Tomb No. 64 at Thebes there can be little if any doubt that Akheperur̄c was a son of Tuthmosis IV, and not, as Davies supposed, of Amenophis III. Akheperur̄c was probably the third son of Tuthmosis IV, and thus a younger brother of Amenophis III, not an elder brother of Akhenaten. The names of the sons of Tuthmosis IV were therefore (1) Amenophis³, who succeeded his father and became Amenophis III, (2) Amenemh̄t, who died young and was buried in his father's tomb in the Bibân el-Mulūk, (3) Akheperur̄c and (4) Akheper(ka?)r̄c.

P.S. In Brunton-Engelbach's recently published memoir on *Gurob*, there is given on Pl. li a list of princes of the Eighteenth to Twentieth Dynasties together with some of their titles. This list is apparently based on Gauthier's *Le livre des rois* and unfortunately several errors have been perpetuated. The first herald R̄c was not a son of Amenophis II: that he is described as a "king's son" is due to a misreading of the Cataract graffito that names him (see Fig. 4). Again, Shemsukheper is given in the list of Amenophis III's sons, but no such name exists: the reading is due to the faulty copy of a Konosso graffito in PETRIE, *Season*, Pl. i, No. 23 (for the correct reading see Fig. 3). I note also that Tutankhamūn is given as a son of Amenophis III without any query mark. It would be interesting to know the evidence for such a definite statement.


¹ This graffito is incorrectly published by PETRIE, *Season*, Pl. i, No. 23, who reads  in place of Akheperur̄c. It is correctly given by L., *D.*, Textband IV, 128, and by J. DE MORGAN, *Catalogue I*, 69, No. 5; but the latter gives it again on p. 103 in a blundered form from MARIETTE, *Monuments égyptiens*.

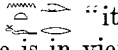
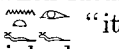

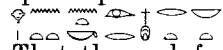
² First copied by Hay in the early thirties of last century—British Museum, *Add. MS.* 29857, f. 13 v. . . Published by PETRIE, *Season*, Pl. i, No. 32; L., *D.*, Textband IV, 127. J. DE MORGAN, *Catalogue I*, 70, No. 19, omits the names of the two king's sons but gives their figures.





³ Wolf in the *Zeitschr. f. äg. Spr.*, LIX, 157 has noted that the "King's Son of Kush, Amenophis," mentioned in a graffito at Sehel, appears also in a stela of Tuthmosis IV at Wadi H̄alfa. He is perhaps to be identified with the Prince Amenophis son of Tuthmosis IV.

(8) "I have faced thee, thou (disease) *smn*, I have faced thee. thou who art sunken in the members of X, the son of Y,  like him who flies and takes his stand waiting in a high place (*i.e.*, probably like the sun-god Rē^c)," *Pap. Leyd.* 343, recto 6, 4. Here exceptionally of present time.

D. Construction doubtful.

(9)  "and he takes the boat of any man in the army," *Decree of Haremhab* 17. The preceding context is destroyed. Another yet more damaged example, *ibid.* 26, end, in Max Müller's edition (*Egyptological Researches.* I, 94).

When one of the later independent pronouns is found immediately preceding a verb-form, the grammarian's first thought is to connect the construction with what I have called the participial statement (*Egyptian Grammar* [henceforth quoted as *Gramm.*] § 373), the type of which is  "it is he who does" so-and-so. Gunn has shown, however, that when future time is in view, the participle is habitually replaced by the *šdm-f* form, type  "it is he who will do." Rare exceptions do exist where *ntf* + imperfective participle has future sense (*Gramm.* § 368), but they are uncommon enough to be practically negligible. Since the construction found in the above-quoted passages in all cases except (8) refers to future time, the participial construction is there virtually ruled out¹. But there are other reasons still more cogent. At the end of the Eighteenth Dynasty we are, indeed, on the verge of the period when less importance can be attached to the *t* in such a form as  in examples (4) and (7)², but the presence of the preposition *hr* before *dît* in (4), though not only superfluous, but also in all likelihood faulty, at least shows that the writer had the infinitive in his mind. Nor have we any warrant for supposing that the construction indep. pron. + participle could depend directly upon a preposition. We shall have occasion below to refer to certain interesting, and perhaps to some extent relevant, constructions where the indep. pron. follows a preposition. But they do not, so far as we know, extend in Middle Egyptian to the participial statement³. Where it is desired to express, by the help of a preposition, some logical nexus between the participial statement and what precedes, the particle *ntt* has to be inserted, ex.  *Pap. Kahun* 29, 39, and this *ntt* cannot simply be omitted at will.





That the verb-form is in reality the infinitive is proved, not only by  in (4) and (7), but also by  in a development of the construction to be quoted below (22). The form  in (2) is not good evidence to the contrary: we are at a period where the omission of *t* does not count for much, though its presence still does: but further, this verb, ending in *d*, would be particularly prone to omit its *t*, and several certain examples of  so written in the infinitive occur in the decree of Haremhab (ll. 28, 29, 35, 36)⁴.

Moreover, it seems extremely difficult to dissociate our construction entirely from the very similarly used Middle Kingdom construction with *hn^c* + infinitive (*Gramm.* § 171, 3). This occurs after the imperative or the *šdm-hr-f* form, *inter alia*, and serves accordingly

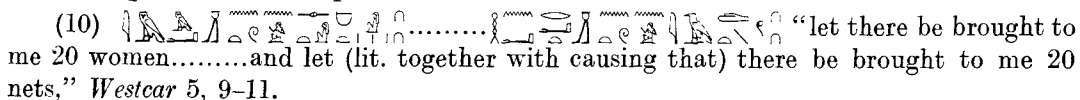
¹ It will be shown below that *hn^c ntf šdm* does not necessarily refer to future time. However, my point here is that in these cases which do refer to future time the participial construction would have been replaced by *ntf šdm-f*.

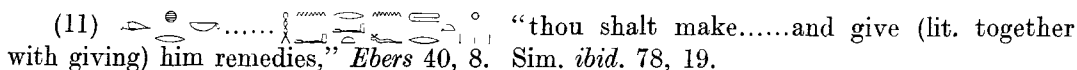
² Perhaps also in the damaged example from *Pap. Boulaq* 15, b, see above under (2).

³ *N šwt nhm tm* in *Pyr.* 1595 c is disposed of by Sethe's critical note III, 92. For another possible example of later date, see below example (18).

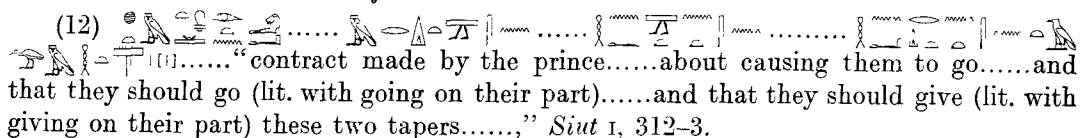
⁴ The Haremhab decree omits the *o* also in the infinitives  l. 24,  l. 28 and  in a very special case l. 18 (below example 31). I have not found any case of *o* being added where it does not belong, so that  in l. 24 (below example 22) is undoubtedly an infinitive.

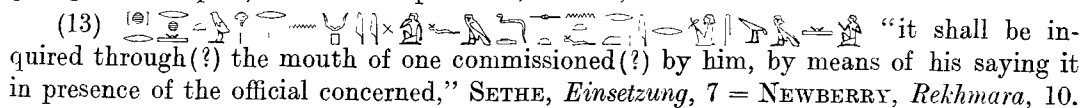
precisely the same conjunctive and prospective purpose as *hnc ntf* + infinitive in our first four examples above. Compare with these:

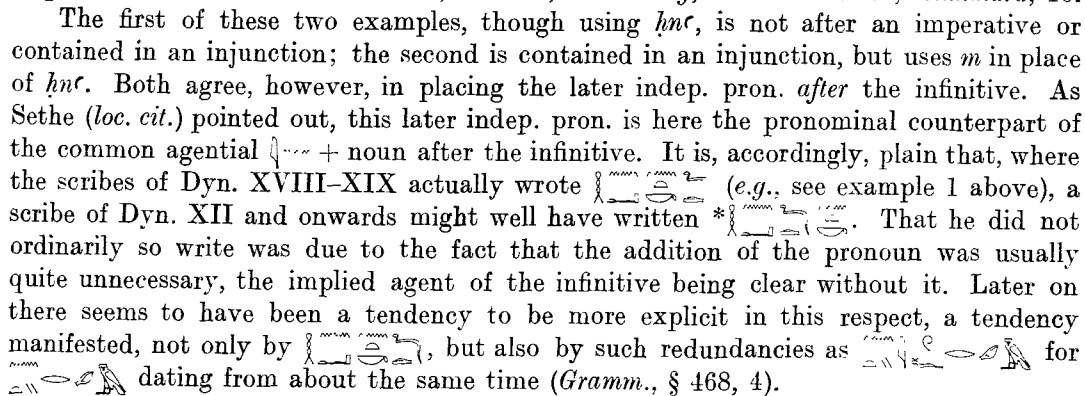
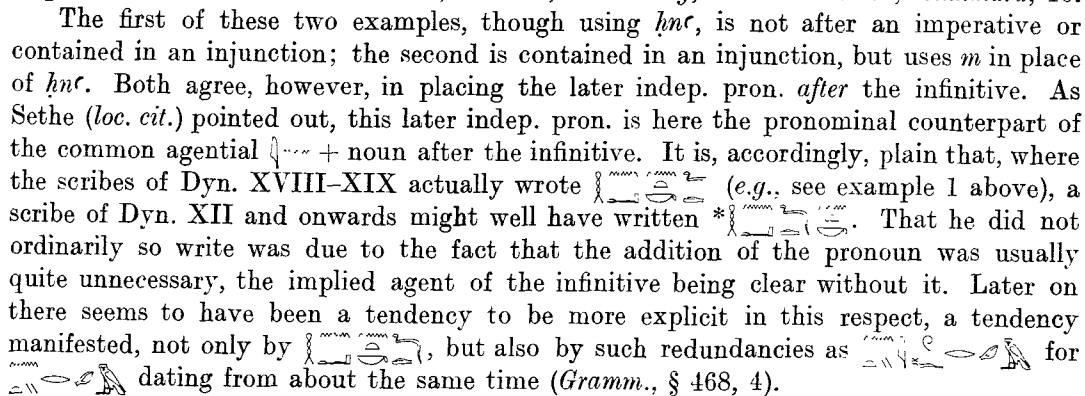
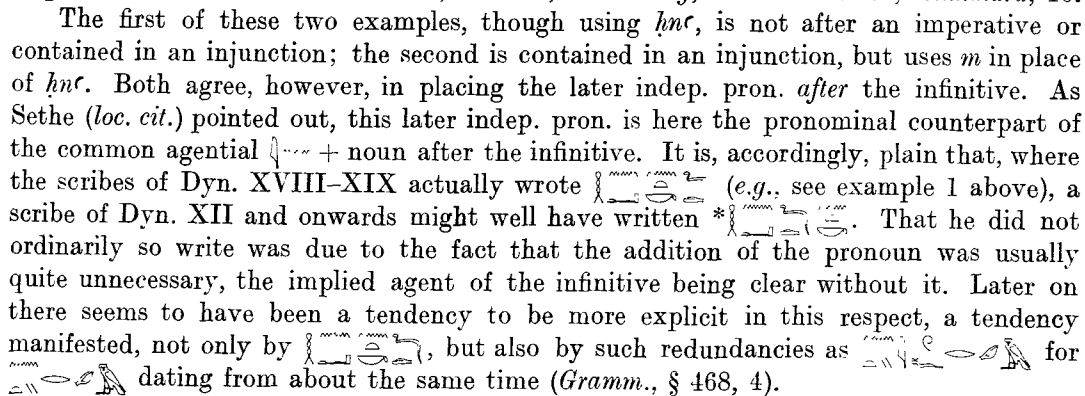
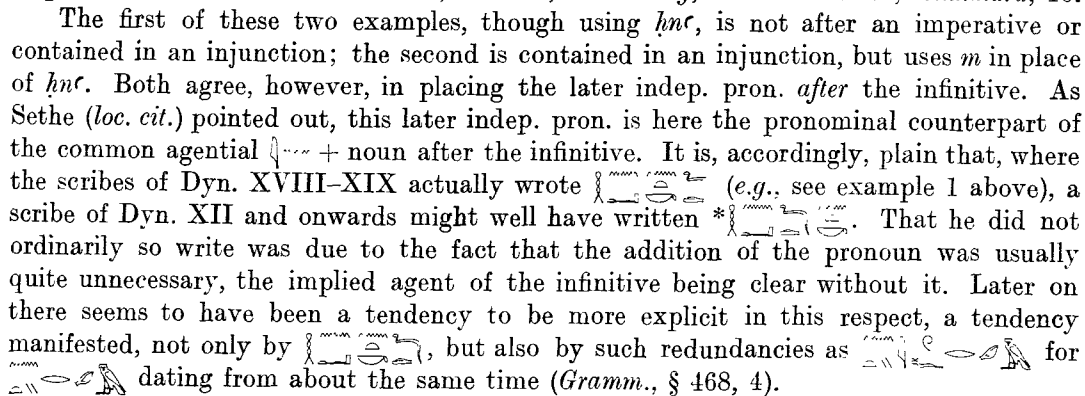
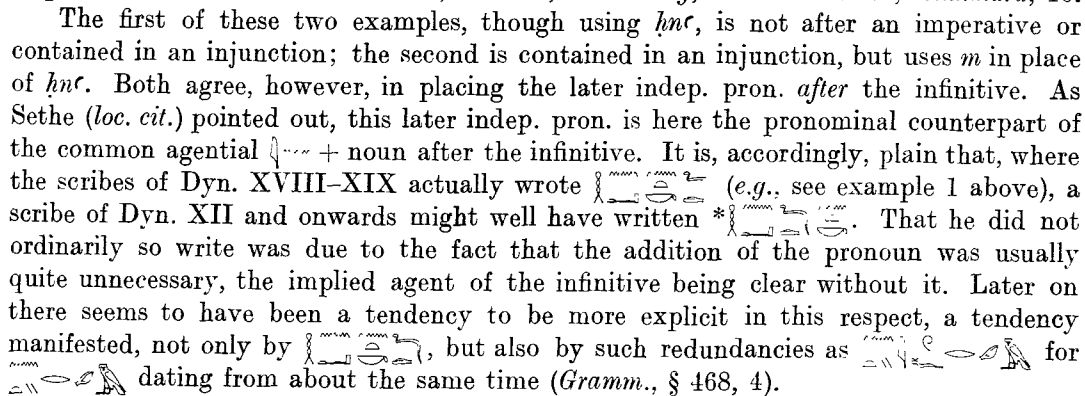
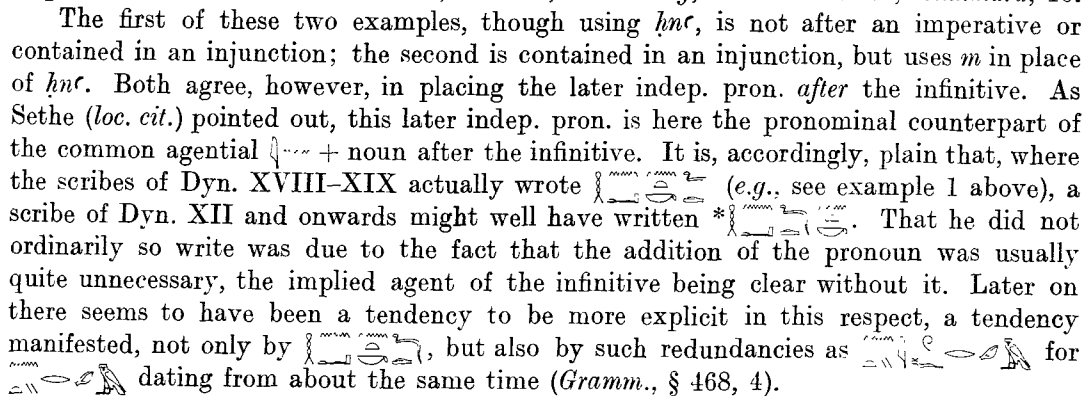
(10)  "let there be brought to me 20 women.....and let (lit. together with causing that) there be brought to me 20 nets," *Westcar* 5, 9-11.

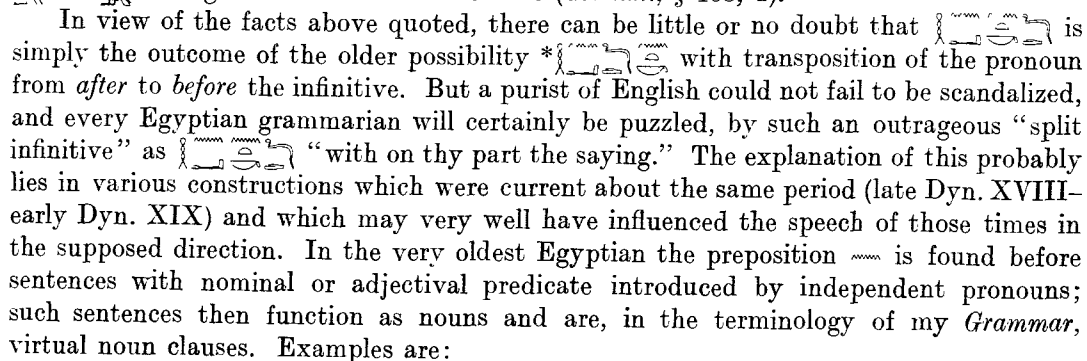
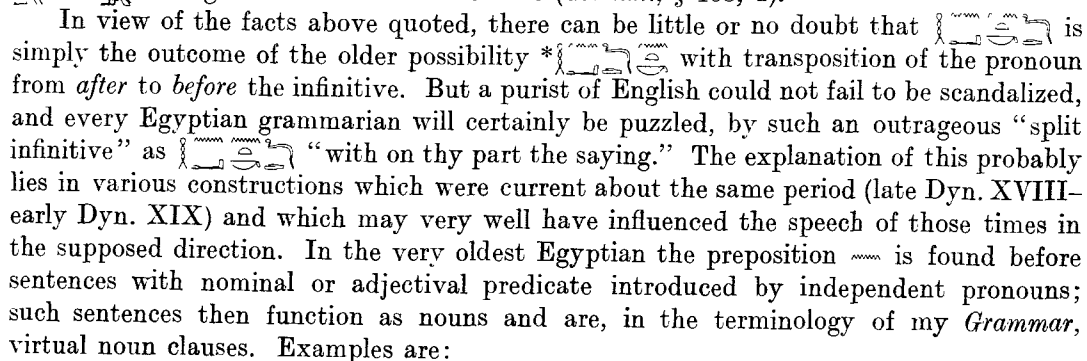
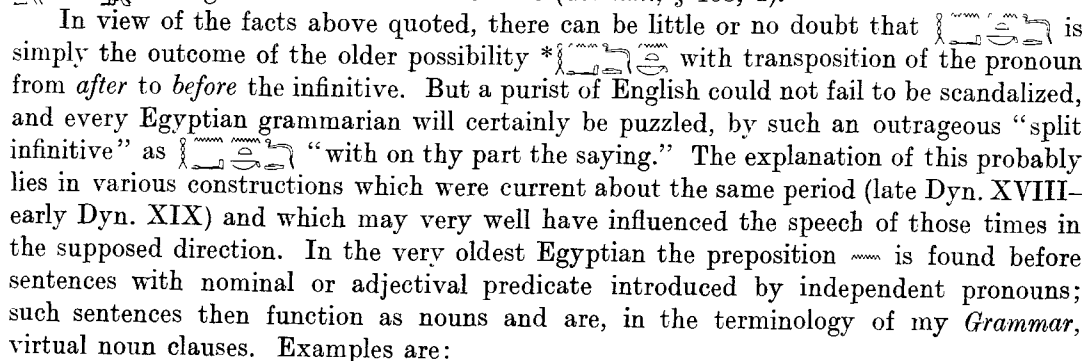
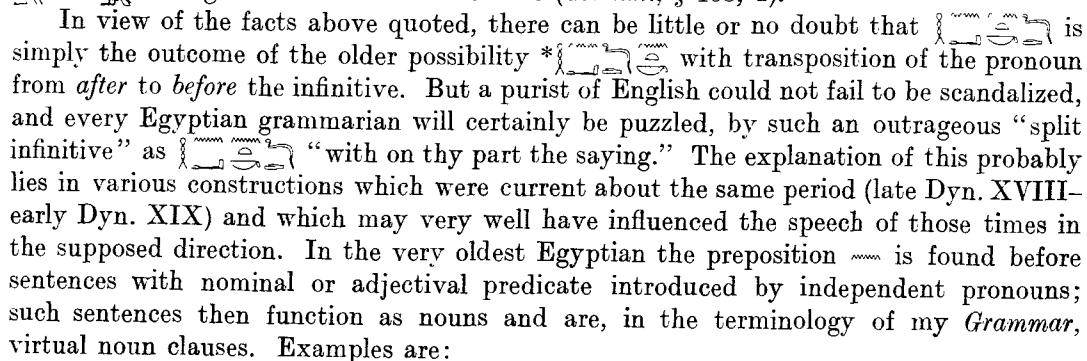
(11)  "thou shalt make.....and give (lit. together with giving) him remedies," *Ebers* 40, 8. Sim. *ibid.* 78, 19.

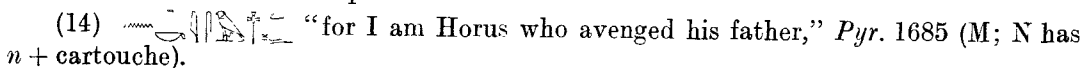
If in such a construction it had been desired expressly to mention the author of the action, there is no doubt whatever that a writer of Middle Egyptian could have placed one of the later independent pronouns *after* the infinitive. Sethe was the first to point out this fact in *Zeitschr. f. äg. Spr.*, xxix, 121; see too *Gramm.*, § 300. We have no examples of the kind that are parallel in all details to the two last, but my assertion is proved by the two next, taken in conjunction with one another.

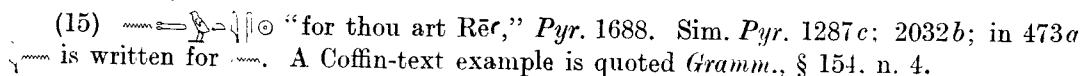
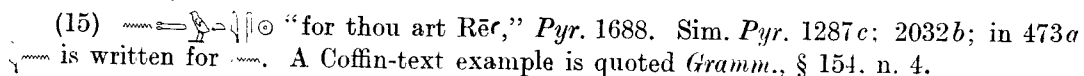
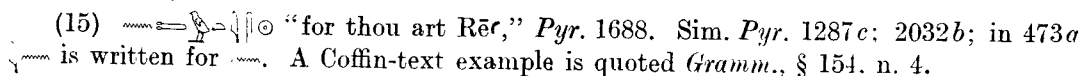
(12)  "contract made by the prince.....about causing them to go.....and that they should go (lit. with going on their part).....and that they should give (lit. with giving on their part) these two tapers.....," *Siut* I, 312-3.

(13)  "it shall be inquired through(?) the mouth of one commissioned(?) by him, by means of his saying it in presence of the official concerned," SETHE, *Einsetzung*, 7 = NEWBERRY, *Rehmarā*, 10.

The first of these two examples, though using *hnc*, is not after an imperative or contained in an injunction; the second is contained in an injunction, but uses *m* in place of *hnc*. Both agree, however, in placing the later indep. pron. *after* the infinitive. As Sethe (*loc. cit.*) pointed out, this later indep. pron. is here the pronominal counterpart of the common agential  + noun after the infinitive. It is, accordingly, plain that, where the scribes of Dyn. XVIII-XIX actually wrote  (e.g., see example 1 above), a scribe of Dyn. XII and onwards might well have written *. That he did not ordinarily so write was due to the fact that the addition of the pronoun was usually quite unnecessary, the implied agent of the infinitive being clear without it. Later on there seems to have been a tendency to be more explicit in this respect, a tendency manifested, not only by , but also by such redundancies as  for  dating from about the same time (*Gramm.*, § 468, 4).

In view of the facts above quoted, there can be little or no doubt that  is simply the outcome of the older possibility * with transposition of the pronoun from *after* to *before* the infinitive. But a purist of English could not fail to be scandalized, and every Egyptian grammarian will certainly be puzzled, by such an outrageous "split infinitive" as  "with on thy part the saying." The explanation of this probably lies in various constructions which were current about the same period (late Dyn. XVIII-early Dyn. XIX) and which may very well have influenced the speech of those times in the supposed direction. In the very oldest Egyptian the preposition  is found before sentences with nominal or adjectival predicate introduced by independent pronouns; such sentences then function as nouns and are, in the terminology of my *Grammar*, virtual noun clauses. Examples are:

(14)  "for I am Horus who avenged his father," *Pyr.* 1685 (M; N has *n* + cartouche).

(15)  "for thou art Rēr," *Pyr.* 1688. Sim. *Pyr.* 1287c; 2032b; in 473a  is written for . A Coffin-text example is quoted *Gramm.*, § 154. n. 4.

examples are all relatively early¹. Again, parallel to a hypothetical * 𐎗𐎠𐎡𐎢 one would expect to find examples with the old perfective like * 𐎗𐎠𐎡𐎢 , and such are not forthcoming. And lastly, I have pointed out that the sense of 𐎗𐎠𐎡𐎢 is, in the examples before us, nearly always future, and future or prospective sense is not at all suitable to a construction deemed to have arisen from the pseudo-verbal construction.

For all these reasons, I adhere to my contention that the idiomatic construction 𐎗𐎠𐎡𐎢 , literally "with on his part the hearing," arose from * 𐎗𐎠𐎡𐎢 "with hearing," through the knowledge that this could be expanded to * 𐎗𐎠𐎡𐎢 "with hearing on his part," and under the influence, partly of constructions like 𐎗𐎠𐎡𐎢 (17), and partly of constructions like * 𐎗𐎠𐎡𐎢 (or 𐎗𐎠𐎡𐎢) with the pseudo-verbal construction. That 𐎗𐎠𐎡𐎢 did in reality somehow become connected with the development from 𐎗𐎠𐎡𐎢 to 𐎗𐎠𐎡𐎢 is shown by three most remarkable passages from the Haremhab decree, from which one of our examples of 𐎗𐎠𐎡𐎢 was actually drawn (9). These examples are:

(22) 𐎗𐎠𐎡𐎢 " [But as to any man in the army of whom one²(?) shall hear that they plunder.....and another comes to report, saying.....," Haremhab decree 24. In 𐎗𐎠𐎡𐎢 the last word is of course for 𐎗𐎠𐎡 .

(23) 𐎗𐎠𐎡𐎢 ".....and these..... come to these princes saying.....," *ibid.* 30. In a very fragmentary context.

(24) "[As to any poor man(??) whose boat(?) is] taken away, and his freight is emptied out 𐎗𐎠𐎡𐎢 And the poor man stands there bereft of his.....," *ibid.* 19. The restoration of the context is highly uncertain.

It looks as though these three examples all formed part of long and complex relative clauses similar to those exemplified in the inscription from the Wâdi 'Abbâd (5-7). That 𐎗𐎠𐎡 in (22) is infinitive is hardly open to doubt³, and it is both noticeable and important that no 𐎗𐎠 stands before it. In (23) 𐎗𐎠𐎡 and in (24) 𐎗𐎠𐎡 are probably likewise infinitives, though in the case of 𐎗𐎠𐎡 it would be possible also to suppose that this is old perfective, in which case we should have an instance of the pseudo-verbal construction instanced in (21) above, but with 𐎗𐎠𐎡 instead of 𐎗𐎠𐎡 and with nominal instead of pronominal subject⁴. The one instance (22) is, however, beyond all doubt, and shows us that the construction 𐎗𐎠𐎡𐎢 —a verb with feminine infinitive is here substituted for the unenlightening 𐎗𐎠𐎡𐎢 —had as its counterpart with nominal subject the form 𐎗𐎠𐎡𐎢 , a form perhaps quite mechanically copied from the corresponding construction with pronominal subject. It has only to be added that the writing 𐎗𐎠𐎡 for 𐎗𐎠𐎡 in the Haremhab decree is confirmed by 𐎗𐎠𐎡 often in the same inscription.

To sum up, whatever may be thought of the analogies put forward above to explain the transposition of the independent pronoun, the fact remains that at the end of Dyn. XVIII and the beginning of Dyn. XIX there was a construction 𐎗𐎠𐎡𐎢 used as a conjunctive tense with future meaning after imperatives, injunctions, and relative clauses referring to future time (see examples 1-9) and that the corresponding construction with nominal subject had the form 𐎗𐎠𐎡𐎢 .

¹ We shall see later that there is a strong statistic argument against supposing that 𐎗𐎠 has been omitted before 𐎗𐎠𐎡 in the example from the Haremhab decree, *i.e.*, example (9).

² Restored from l. 28.

³ See above p. 87, n. 4.

⁴ However, in a very similar context, l. 15, 𐎗𐎠𐎡 is 𐎗𐎠𐎡 , a verb-form expressing action like the infinitive, and not duration like the old perfective.

𐎗𐎛𐎟𐎠 contains no time-implication at all, my theory is not in the least impaired by Late Egyptian examples of 𐎗𐎛𐎟𐎠 continuing past narrative as in

(30) 𐎗𐎛𐎟𐎠 𐎗𐎛𐎟𐎠 𐎗𐎛𐎟𐎠 𐎗𐎛𐎟𐎠 𐎗𐎛𐎟𐎠 𐎗𐎛𐎟𐎠 “they said to him...and he heard all that they said,” *d’Orbiney* 1, 9. Possibly if we had more examples of *hnc ntf irt* this would also be found continuing past narrative. At all events examples of *hnc irt* (i.e., the same construction without expressed pronominal subject) can be quoted where the reference is not to future time; see *Gramm.*, § 171, 3.

I must now produce further considerations in support of my thesis that 𐎗𐎛𐎟𐎠 and 𐎗𐎛𐎟𐎠 are ultimately identical. The falling away of the preposition *hnc* is hardly more difficult to accept than the falling away of *hr* in *iw-f hr sdm* (εγωῦμα) and many similar Late Egyptian constructions. That 𐎗𐎛𐎟𐎠 should be rendered in Late Egyptian by 𐎗𐎛𐎟𐎠 is perfectly natural, though to those unacquainted with Late Egyptian habits of writing it may seem strange. The ordinary later indep. pron., in Middle Egyptian 𐎗𐎛𐎟𐎠 and in Coptic ⲛⲧⲟϥ, is regularly written 𐎗𐎛𐎟𐎠 in Late Egyptian. Similarly, Late Egyptian writes 𐎗 for the particle 𐎗 simply owing to the fact that some old examples of real *m* later changed into *n*, as for example the preposition *m* “in” itself. On my theory, the 𐎗 of 𐎗𐎛𐎟𐎠 never changed its sound at all; it survives in Bohairic as ⲛⲧⲟϥ¹, i.e., in the same phonetic form which it probably had in Dyns. XVIII–XIX; 𐎗𐎛𐎟𐎠 would simply be an unetymological Late Egyptian writing (see SETHE, *Verbum*, I, § 220, 3).

My argument would of course fall to the ground at once if, as is usually assumed, 𐎗𐎛𐎟𐎠 were really an inexact writing of 𐎗𐎛𐎟𐎠, which is also found in Late Egyptian papyri. Let us see what Erman has to say on the subject in his old, but still indispensable and un-superseded, *Neuägyptische Grammatik* (Leipzig, 1880). He there (§ 221) writes: “𐎗𐎛𐎟𐎠 *mtuf hr stm*, die dem *tuf hr stm* entsprechende Form, ist von dem einfachen *mtuf stm* halb verdrängt. Manche Texte (z.B. Salt) gebrauchen es gar nicht mehr, und die welche es noch kennen (z.B. Orb[iney] und Bol[ogna 1094]) verwenden es auch nicht mehr konsequent.” So too the new Berlin Dictionary (II, 165) gives under *mt-* (*mtw-*) 𐎗𐎛𐎟𐎠: “I. der gewöhnliche Gebrauch mit *hr* und Infinitiv (das *hr* fehlt zumeist).” In both statements the truth has been correctly observed, namely that 𐎗𐎛𐎟𐎠 is infinitely commoner than 𐎗𐎛𐎟𐎠. But the correct inference has not been drawn. The correct inference is that 𐎗𐎛𐎟𐎠 was the original form, and that 𐎗𐎛𐎟𐎠 is as much a corruption of it as 𐎗𐎛𐎟𐎠 is a corruption of 𐎗𐎛𐎟𐎠 or as 𐎗𐎛𐎟𐎠 is a corruption of 𐎗𐎛𐎟𐎠 (see SETHE, *Verbum*, II, 249, foot-note 1). These spurious forms with 𐎗 arose by false analogy with 𐎗𐎛𐎟𐎠 and 𐎗𐎛𐎟𐎠, real historical writings of the old pseudo-verbal construction (see *Gramm.*, §§ 323, 330). By the beginning of Dyn. XIX the *hr* of *tw-i hr sdm* and *iw-f hr sdm* had long since ceased to be spoken, but was still usually written. About that period *hr* began, for this reason, to find its way into forms where it did not belong, and simultaneously began to be omitted from forms where it did belong, so that we already find sporadic examples of the now phonetically exact, but historically inexact, writings 𐎗𐎛𐎟𐎠, 𐎗𐎛𐎟𐎠. These two contrary tendencies—insertion of 𐎗 on supposedly historical grounds and omission of 𐎗 for phonetic reasons—had not advanced far in the earlier part of Dyn. XIX, so that we may still learn from the more careful texts of that period in what cases 𐎗 is truly etymological and in what cases it is not.

¹ The Saʿīdic dialect shortens this to ⲛⲧ and Akhmīmic shortens it still further to ⲛ. Before nominal subject Saʿīdic and Bohairic both have ⲛⲧⲟϥ, while Akhmīmic has ⲧⲟϥ.

innovation *mtw.f* the exception; a very few years later *mtw.f* has become the rule, and the exception is *hnc ntf*. One example of $\overline{\text{hnc ntf}}$ occurs (l. 112), connecting on from a very distant phrase "as to any people to whom anyone...shall come....." Both here and in the decree of Haremhab (I omitted to mention this in the body of my article) *hnc* + the simple infinitive is still used in contexts like

(34) $\overline{\text{hnc ntf}}$ "the law shall be exerted against him by beating him.....and exacting the work.....from him," ll. 46-7; sim. 79 and with the synonym $\overline{\text{hnc}}$ for $\overline{\text{hnc ntf}}$ ll. 50, 54, 93. Cf. *Haremhab decree*, l. 28.

Here the implicit agent of the infinitive is the indefinite "one." Later, when the use of the conjunctive tense had been extended, we might probably find $\overline{\text{mtw-tw šd}}$ "and one shall exact....." (from hypothetical * $\overline{\text{hnc ntf}}$) in its place. But for this the moment was not yet.

Still more important than the evidence from the Nauri inscription is that from the Elephantine decree (*temp.* Ramesses III?) also treated in Professor Griffith's article¹. Here is a passage which, with the help of M. Jéquier's corrections of the published text, reads as follows:

(35) $\overline{\text{hnc ntf}}$ "[As to.....any serfs.....any] bee-keeper (?) or any person belonging to the temple who shall be interfered with and who shall say: 'A certain inspector (= is for $\overline{\text{hnc}}$) or a certain soldier has interfered with me'.....," DE ROUGÉ, *Inscriptions hiéroglyphiques*, Pl. 257, l. 7, cf. *Sphinx* 16, 4.

Either the original has omitted $\overline{\text{hnc}}$, which is very unlikely, or here we have the missing link $\overline{\text{hnc}}$ (with suppression of the *hnc* of *hnc ntf*) for $\overline{\text{hnc ntf}}$ —the very link required in order finally to prove my case! An entirely isolated case, where the scribe has taken it into his head to write the pronoun archaically.

Professor Sethe, who has kindly read over my manuscript, makes one important point that I had overlooked. In all the cases of $\overline{\text{hnc ntf}}$ and in most of the early ones of $\overline{\text{mtw-tw}}$ there is no change of subject. Cases like (30) "they saidand he heard" must, accordingly, be regarded as further developments of the consecutive tense. This holds good, however, only of pronominal subject. With nominal subject, *i.e.* in examples of the type $\overline{\text{hnc ntf}}$ or $\overline{\text{mtw-tw}}$, of course there is change of subject. Thus is brought into even greater relief the singularity of the construction with nominal subject, apparently quite mechanically copied from the pronominal type. If a scribe of the early Eighteenth Dynasty had wished to employ a construction of this kind, he would have had to write * $\overline{\text{hnc ntf}}$.

At the last moment Sethe calls my attention to a passage which shows that the construction $\overline{\text{hnc ntf}}$ postulated by me at least as a theoretical stage in the development from $\overline{\text{hnc}}$ to the Late Egyptian and Coptic conjunctive, did actually sometimes occur in this form. The passage is from the well-known text relating the Destruction of Mankind:

(36) $\overline{\text{hnc ntf}}$ "Take heed to the snakes of land and water, and also make thou writings (*i.e.*, send letters?) to every region of thy snakes where (they) are," *Trans. Soc. Bibl. Arch.*, IV, Pl. C, opposite p. 18, l. 58 = *op. cit.*, VIII, Pl. 2, opposite p. 418, l. 41. For the text of Sethos I quote from my own collation: that of Ramesses III has also *ntk*.

¹ *Journal*, XIII, 207.

It is noticeable that here *ntk* marks no change of subject, nor does any appreciable degree of emphasis appear to rest upon that pronoun. In other words, the use is practically identical, except as regards the word-order, with that of *hnc ntk sdm* in examples (1) and (2), and that of *mtw·k sdm* in example (25).

We have now, accordingly, good examples of all stages in the evolution of the Late Egyptian conjunctive tense. Those stages, expressed in a paradigm of the second person singular, are: (1) *hnc sdm*; (2) *hnc sdm ntk*; (3) *hnc ntk sdm*; (4) *ntk sdm*; (5) as last, but written *mtw·k sdm*.

NOTES ON THE EARLY HISTORY OF TIN AND BRONZE

By A. LUCAS

Tin.

The word "tin" is often loosely used to designate both the metal and the ore, but in order to avoid ambiguity and misunderstanding, the term in the present note will be restricted to its correct meaning of the metal.

In antiquity the principal use of tin was for making bronze, though occasionally it was employed alone. The early history of tin is very obscure and no evidence can be found to show when it was first discovered. The sequence of tin and bronze is also uncertain, though from the fact that the first recorded appearance of tin was in the form of its alloy bronze, as also from theoretical considerations, the probability is that bronze was made some considerable time before tin as an individual metal was isolated, just as brass (an alloy of copper and zinc) was known long before zinc itself was discovered. Either tin or tin ore, however, must have been used to produce bronze, of which tin is an indispensable constituent, though if the ore, as distinguished from the metal, were employed, it need not necessarily have been recognized at first as being essentially different from copper, all the knowledge required being a realization that ore from a certain place produced an improved form of copper.

Although tin ore, so far as is known, does not occur in Egypt, the earliest use of tin, apart from bronze, that has been found is from Egypt and the earliest references to tin that are known are also possibly Egyptian. Thus the first objects of tin of which any records can be traced, namely a ring^{1,2} and a pilgrim bottle³, are from Egyptian graves of the Eighteenth Dynasty (1580 B.C. to 1350 B.C.). A ring, consisting of an alloy of tin and silver, is also known from the same period⁴ and an ore of tin (the oxide) was employed in Egypt in small amount from the Eighteenth Dynasty onwards for imparting a white opaque colour to glass^{5,6}. The earliest references to tin that can be found are three that occur in the Harris Papyrus⁷, an Egyptian document of the Twentieth Dynasty (1200 B.C. to 1090 B.C.). The next references in chronological order are in Homer⁸ (ninth cent. B.C.), then another Egyptian reference of the Twenty-fifth Dynasty⁷ (712 B.C. to 663 B.C.), after which come four references in the Bible⁹, one in Numbers

¹ W. M. FLINDERS PETRIE, *The Arts and Crafts of Ancient Egypt*, 1910, 104.

² J. H. GLADSTONE, *On Metallic Copper, Tin and Antimony from Ancient Egypt*, in *Proc. Soc. Bibl. Arch.*, XIV, 1892, 226.

³ E. R. AYRTON, C. T. CURELLE and A. E. P. WEIGALL, *Abydos*, III, 1904, 50.

⁴ C. R. WILLIAMS, *Gold and Silver Jewelry and Related Objects*, 1924, 29, 92.

⁵ B. NEUMANN and G. KOTYGA, *Z. für angew. Chem.*, 1925, 776-780, 857-864.

⁶ H. D. PARODI, *La ceramica in Egitto*, 1908, 34, 45.

⁷ J. H. BREASTED, *Ancient Records of Egypt*, IV, 245, 302, 385, 929. The meaning of the word translated "tin" is however stated to be doubtful.

⁸ *Iliad*, XI, 25, 34; XVIII, 474, 565; XX, 271; XXI, 592; XXIII, 503, 561.

⁹ *Numbers*, 31, 22; *Isaiah*, 1, 25 (the R.V. gives the alternative reading "alloy"; *Ezekiel*, 22, 18 and 20; 27, 12.

(about fifth cent. B.C.), a doubtful one in Isaiah (either eighth or fifth cent. B.C.) and two in Ezekiel (sixth cent. B.C.), then Herodotus¹ (fifth cent. B.C.), Diodorus Siculus² (first cent. B.C.), Julius Caesar³ (first cent. B.C.), Strabo⁴ (first cent. B.C. to first cent. A.D., in one instance quoting Posidonius of the second to first cent. B.C.), Pliny⁵ (first cent. A.D.) and other classical writers.

In the first century A.D. tin was being shipped by way of Egypt to Somaliland and India⁶, but from where it was obtained is not stated. For all practical purposes tin may be said not to occur naturally in the metallic condition, since if it does occur, about which there is some doubt, it is in such small quantity as to be negligible. The form in which tin is found in nature is in the combined state as a mineral, the principal and only tin mineral of importance being the oxide (cassiterite or tinstone), though a sulphide combined with the sulphides of copper and iron (stannite, stannine or tin pyrites) is found in small quantity in certain localities.

Metallic tin is one of the easiest metals to produce and it may be obtained by simply heating the oxide with coal or charcoal, the latter being the fuel employed anciently, since the former was unknown. Charcoal, too, was the fuel generally used for smelting until about the eighteenth century A.D. The metal, however, cannot be produced from the sulphide by any such simple means, which is proof that this ore was not employed anciently as a source of tin.

Tin oxide occurs in two forms, one in veins (lodes), always in granite or granitic rocks and occasionally associated with copper ore, and the other as pebbles, gravel or sand, derived from the disintegration of rocks bearing vein ore, the debris from which has been carried and deposited by water.

Tin ore (cassiterite) is heavy and usually dark brown or black in colour and, except the weight, there is nothing to suggest that it is a metallic compound. It is frequently found in the same alluvial gravels as gold, and since both are obtained by the same method, namely by washing away the lighter material with running water, it is exceedingly probable that when gold was being searched for the heavy tin oxide, which, however, is not nearly so heavy as gold, would be noticed and it seems likely that the alluvial ore was discovered in this manner. On account of this association with gold and also because the alluvial ore occurs in more accessible places and is more easily mined than the vein ore, it was probably alluvial ore that was worked first deliberately as a separate ore⁷.

The locality where tin ore was first found has never been satisfactorily established and claims have been made for Europe⁸, Asia⁹ and Africa¹⁰ respectively. These may now be examined. From considerations of the state of civilization of various countries the enquiry may be limited to Egypt, Western Asia, South-Eastern Europe, Central Europe

¹ III, 115.

² *Historical Library*, v, 11.

³ *De Bello Gallico*, v, 12.

⁴ *Geography*, III, II, 9 and v, 11; xv, II, 10.

⁵ *Natural History*, IV, 30, 34, 36; VII, 57; XXXIV, 47, 48.

⁶ W. H. SCHOFF, *The Periplus of the Erythraean Sea*, New York, 1912, 33, 42, 45.

⁷ This does not lessen the likelihood that it was the vein ore that was originally employed for making bronze, since this need not have been recognized at the time as a separate ore and even its presence may not have been known, if it occurred, as suggested, as an accidental admixture with copper ore.

⁸ W. M. FLINDERS PETRIE, *op. cit.*, 101.

⁹ G. ELLIOT SMITH, (a) *The Ancient Egyptians*, 1923, 12, and (b) Article *Anthropology*, *Ency. Brit.*, 12th ed., 1922.

¹⁰ H. C. HOOVER and L. H. HOOVER, Note to translation of Agricola's *De Re Metallica*, 1912, 412.

and Africa, other than Egypt. In this area, so far as can be ascertained, tin ore occurs only in Bohemia, Saxony, Tuscany, Elba, Armenia, Persia, possibly Syria and in West, Central and South Africa. Many otherwise likely countries, including Egypt, Turkestan, Mesopotamia, Arabia, Caucasus, Georgia, Asia Minor, Crete, Greece, Cyprus and Palestine, may all be dismissed from the enquiry, since, so far as is known, tin ore does not occur in any of them.

Bohemia and Saxony.

Bohemia and Saxony are contiguous and the ore deposits in the two countries are continuations one of the other and in neither case is there any evidence of tin-mining before about the twelfth century A.D.^{1,2,3} There is also no trace of any trade in tin between these places and the eastern Mediterranean region, which must have taken place at an early date if tin were originally a western and not an eastern product, and any such trade existing in classical times would almost certainly have been recorded. The absence of any mention of a trade in tin from Bohemia and Saxony cannot have been because the ore only occurred in small amount and soon became exhausted, as is suggested was the case with the Western Asia ore, since the mines are still productive, though now only on a small scale. The fact that the ore apparently occurs only in the vein and not in the alluvial form^{2,4} is another slight indication that it was not employed as a source of metallic tin at an early period. Also, the Bronze Age of this region began later than is to be expected had it been the home of the industry.

Tuscany.

With regard to Tuscany there is evidence of earlier working than in Bohemia and Saxony, but otherwise the case is much the same. The Tuscany ore occurs only in very small amount, being sparsely distributed in veins of limonite (an iron ore) and is associated with small quantities of copper minerals⁵. Since the ore is in the vein formation and not as an alluvial deposit it is unlikely to have been a very early source of tin and from the fact that the iron ore in which it occurs was apparently worked concurrently with the tin oxide it becomes almost certain that the exploitation of the latter must be dated to the comparatively late period when metallic iron was known and was smelted from its ores in Italy, which was not before the latter half of the second millennium B.C. The two tin buttons from the sepulchral cave of Monte Bradoni in Etruria⁶, which have been attributed to the third millennium B.C. on account of a dagger of Early Minoan type (E.M. II) found with them, need explanation, but if the objects can be dated to the latter part of the second millennium B.C., which does not seem excluded by the archaeological evidence, the presence of the tin, even though obtained from the local mines, of which there is no proof, in no way conflicts with an earlier knowledge of this metal elsewhere.

¹ P. VON LICHTENFELS, quoted by J. W. MELLOR in *Inorganic and Theoretical Chemistry*, vii, 1927, 278.

² G. M. DAVIES, *Tin Ores*, 1919, 80.

³ J. G. WILKINSON in footnote to *Herodotus* Rawlinson's translation, iii, 115. The statement of this writer seems to be based on Matthew Paris, who relates that a Cornishman first discovered tin in Germany in 1241 (*Historia Major Angliæ*, London, 1571).

⁴ W. R. JONES, *Tinfields of the World*, 1925, 145.

⁵ W. R. JONES, *op. cit.*, 156.

⁶ V. GORDON CHILDE, *The Dawn of European Civilization*, 1925, 33.

Elba.

In Elba only isolated specimens of tin ore have been found and there is no evidence of ancient mining¹.

Armenia.

With respect to Armenia de Morgan says that tin ore has not been found in Russian Armenia², but Karajian states that this mineral exists in the Kurbaba mountains near Tillek³; between Sahend and the river Araxes associated with copper ore and therefore probably in the vein form; also near Migri on the Araxes and in Hejenan⁴. Haverfield also says that tin ore is found in Armenia⁵, but does not give his authority.

Persia.

As to the presence of tin ore in Persia there can be no doubt. Strabo states that in his day it was found in Drangiana⁶ (Khorasan); de Morgan says that it occurs at about 25 kilometres from Tauris and at Azerbeidjan, though not at Khorasan⁷; Haverfield, however, says that it does occur in Khorasan⁵, as does the writer of the British Museum *Guide to the Antiquities of the Bronze Age*, who also mentions two other localities, namely Astrabad and Tabriz respectively⁸. Moustafa Khan Fateh states that tin ore occurs between Sharud and Astrabad⁹, while another writer says that it is found in the Kuh-i-Benan mountains and also further north-west along the same belt in the Qara Dagh mountains¹⁰. There is no evidence to show whether the Persian ore is in the vein form or whether it is alluvial or both.

Syria.

With regard to Syria, Karajian states that "The ancient records show that tin, cassiterite ore, was mined near the present town of Sinous and also near Aleppo⁴," and Toll says that "Tin deposits in the Kesserwan district were examined and approved by Australian engineers¹¹." This district is a little to the north-west of Beirut. No confirmation of tin ores near Sinous or Aleppo can be obtained, and that reported from Kesserwan, if present, is probably in very small quantity and there is no evidence that it was worked anciently.

Africa.

Tin ores are known to occur in Nigeria, the Gold Coast (small amount), Nyassaland (small amount), Belgian Congo, Southern Sudan, Portuguese East Africa (small amount), South-West Africa, Rhodesia, Union of South Africa (Transvaal, Cape Province and Natal) and Swaziland^{12,13,14}. In Rhodesia and the Northern Transvaal ancient workings

¹ G. M. DAVIES, *op. cit.*, 82.

² J. DE MORGAN, *Mission scientifique au Caucase*, I, 1899, 15, 34, 35.

³ H. A. KARAJIAN, *Mineral Resources of Armenia and Anatolia*, 1920, 186.

⁴ H. A. KARAJIAN, *op. cit.*

⁵ F. HAVERFIELD, *Romano-British Cornwall*, 1924, 17.

⁶ *Geography*, II, 10.

⁷ J. DE MORGAN, *Mission scientifique en Perse*, III, 1905, 119.

⁸ London, 1920, 8.

⁹ MOUSTAFA KHAN FATEH, *The Economic Position of Persia*, 1926.

¹⁰ Geog. Section Naval Intel. Div., Naval Staff, Admiralty, *Geol. of Mesopotamia and its Borderlands*, 69, 70.

¹¹ I. M. TOLL, *The Mineral Resources of Syria*, in *Eng. and Mining Journ.*, CXXII (1921), 851.

¹² W. R. JONES, *op. cit.*, 254-302.

¹³ G. M. DAVIES, *op. cit.*, 47-56, 91-93.

¹⁴ P. M. LARKEN, *An Account of the Zande*, in *Sudan Notes and Records*, IX (1926), 6.

for tin ore, the remains of smelting furnaces, small stacks of tin ore (cassiterite) and copper ore (malachite), tin ingots and lumps of bronze have been found^{1,2}.

At first sight therefore it might appear that there was sufficient evidence to raise the presumption of an African origin for the earliest tin and bronze known in Egypt, but on a closer examination of the facts any such origin is seen to be so very improbable as to be practically disproved. Thus except in Nigeria, Rhodesia, and the Transvaal there is no evidence whatever that the deposits of tin ore were even known, much less worked, until quite recently. With regard to Nigeria it is stated that the alluvial ore was worked by the native inhabitants before its existence was known to Europeans³, but as this only refers to the modern exploitation by Europeans since 1884 it does not carry the matter very far back and it is in no way improbable that the knowledge of tin ore and the methods of treating it to produce the metal were originally derived from European sources, possibly Portuguese. In Rhodesia and the Transvaal, although the remains of the industry are admittedly old, there is no evidence that they are of such antiquity as to link them up with the Bronze Age in Egypt.

It should not be forgotten, too, that the Egyptian Bronze Age is indissolubly connected with the Bronze Age both in Western Asia and in Europe, and that if the first tin and bronze known in Egypt came from Africa the early tin and bronze of both Western Asia and of Southern Europe must also have come from Africa. It is inconceivable, however, that material from countries situated to the south or south-west of Egypt should have been traded in quantity for many years to Egypt and through Egypt without leaving any evidence of the traffic or any trace or knowledge of either tin or bronze on the way, and no such evidence or traces are known.

Western Europe.

No account of tin would be complete without reference to tin from Western Europe. The early history of this is obscure, but the known facts may be considered. Tin ores occur in Spain, Portugal, France and Britain and these sources may now be dealt with.

Spain and Portugal.

These two countries may conveniently be considered together. The principal deposits of tin ore are situated in the provinces of Salamanca and Zamora in the west of Spain, in the provinces of Orense, Pontevedra and Corunna in the north-west of Spain and in the provinces of Troz os Montes and Beira Alta in northern Portugal. Other and smaller occurrences are found in the provinces of Murcia and Almeria in South-East Spain^{4,5}.

The tin ores of Spain and Portugal are in the form both of lodes and of alluvial deposits and are still mined, the present-day production, however, being small, especially in Spain^{4,5}. The date when they were first worked is unknown. The earliest certain references to tin from the peninsula are those of Diodorus Siculus⁶ (first cent. B.C.), Strabo⁷ (first cent. B.C. to first cent. A.D., who quotes Posidonius of the second to first cent. B.C.) and Pliny⁸ (first cent. A.D.), but very probably the tin trade from the West

¹ *Ancient African Metallurgy*, in *Mining Mag.*, Sept. 26, 1926.

² *The Antiquaries Journ.*, VII (1927), 74, quoting *South African Mining and Eng. Journ.*, July 24, 1926, 596.

³ W. R. JONES, *op. cit.*, 256.

⁴ G. M. DAVIES, *op. cit.*, 82, 84.

⁵ *Historical Library*, v, 11.

⁶ *Natural History*, XXXIV, 47.

⁷ W. R. JONES, *op. cit.*, 150-156.

⁸ *Geography*, III, v, 11 and II, 9.

to Greece mentioned by Herodotus¹ (fifth cent. B.C.) was at least in part from Spain-Portugal.

Although it is frequently stated that the Spanish-Portuguese tin ores were worked by the Phoenicians, no evidence for this can be found and the only certain connexion between these people (who were essentially maritime traders and not miners) and tin is that Strabo states that they carried on a trade in tin from Gades (Cadiz). This might therefore take the age of tin-mining in the peninsula further back than the earliest date yet mentioned, namely the time of Herodotus, but it could not be before the eighth cent. B.C., since, although tradition assigns the foundation of Gades to about 1000 B.C., there is no archaeological evidence for the Phoenicians anywhere in the Western Mediterranean before about the middle of the eighth cent. B.C.²

If the knowledge of tin reached Spain from the East, as it almost certainly did, it would be expected that the south-eastern ores, which are nearest to the point where the eastern influence would first penetrate and not very far from the coast, would be exploited first; but no evidence that they were known anciently can be traced. This, however, may be explained on the assumption that these deposits, which are comparatively small, were soon practically exhausted and after the more extensive deposits of the north-west had been discovered the former became relatively unimportant and were no longer worked.

The ores described by Strabo and Pliny were those in the north-west of the peninsula. The former writer, quoting Posidonius, states that tin was found amongst the Artabri³ (the people of Galicia) and the latter says that it was obtained from Galicia (North-West Spain) and Lusitania⁴ (Portugal and adjoining parts of Spain).

According to Diodorus⁵ the tin ore was not upon the surface of the ground, but was dug up. This does not necessarily mean that it was vein ore, but might apply equally well to alluvial ore that was covered, as is usually the case, with some overburden. On this point, however, both Strabo and Pliny would seem to contradict Diodorus. Thus Strabo says that the earth in which the tin ore occurred was "brought down by the rivers; this the women scrape up with spades and wash in sieves³," while Pliny says of the ore that "It is a sand found on the surface of the earth and of a black colour and is only to be detected by its weight. It is mingled with pebbles, particularly in the dried beds of rivers⁴." Manifestly the ore known to both these writers was alluvial.

France.

The tin ores of France occur in two localities, namely in the centre of the country and in Southern Brittany and, although no longer of commercial importance, there are ancient workings in both places. The former, so far as can be ascertained, are in lodes, while in Brittany both vein and alluvial ores occur^{6,7,8,9}. Geographically, France, especially Brittany, is situated mid-way between the Spanish peninsula and Britain, and unless tin was discovered spontaneously in different centres in the same chronological order as the countries are situated geographically, of which there is no proof and little

¹ III, 115.

² *The Camb. Ancient History*, II, 1924, 581.

³ *Geography*, III, II, 9.

⁴ *Natural History*, XXXIV, 47.

⁵ *Historical Library*, V, 11.

⁶ W. R. JONES, *op. cit.*, 141, 142.

⁷ G. M. DAVIES, *op. cit.*, 76-78.

⁸ C. DARYLL FORD, *Megaliths and Metals in Brittany*, in *Mon*, XXVI (1926), 137.

⁹ M. CARY, *The Greeks and Ancient Trade with the Atlantic*, in *J.H.S.*, XLIV (1924), 166-179.

probability, it seems reasonable to suppose that the knowledge of tin-mining spread northwards from Spain.

Although the amount of tin ore in France is very small, the deposits have been worked intermittently from very early times until a comparatively recent period (1918)¹.

The classical writers entirely ignore the tin from France, unless "the barbarians who dwell beyond the Lusitanians" mentioned by Strabo² were the inhabitants of France, or the Oestrymnides of Avienus³ were part of Brittany or unless it was off this coast that the Cassiterides were situated.

Britain.

Britain early comes into prominence as a tin-producing country, and Cornwall, together with the west of Devon, was for centuries the most important tin-mining region of the world. The Phoenicians are frequently credited with having cruised along the coast of Portugal and the shores of the Bay of Biscay and eventually arriving opposite Britain, crossing to Cornwall and exploiting, and even possibly finding, tin ore, but there is no evidence whatever for anything of the sort and no Phoenician remains have been found in Britain⁴. It is not necessary, however, to introduce the Phoenicians in order to explain the discovery of British tin ore, since it seems probable that the Bretons, familiar with their own gold and tin ore, may have crossed to their kindred in Cornwall and may have found and worked the similar deposits occurring there.

The date when the Cornish tin ore was first worked is a much disputed point, but it must have been before the Roman conquest of Britain, since British pre-Roman objects have been found in the ancient workings and tin was used for certain British pre-Roman coinage⁵. Even this, however, does not carry the mining very far back, since coinage was only introduced into Britain about 200 B.C. The early ingots and vessels of tin and of pewter that have been discovered in Britain, in those cases in which they can be dated, mostly belong to the third or fourth cent. A.D.⁵ The lumps of rough tin found by Borlase in Cornwall mixed with bronze celts under conditions stated to indicate the Bronze Age⁶ do not seem to be precisely dated and might have belonged to the very late Bronze Age.

The writer of the British Museum *Guide to the Antiquities of the Bronze Age* states⁷ that tin is rarely included with founders' hoards of rough copper "doubtless because the powdery ore is of a brown colour and not easily distinguishable in the ground." Tin ore, however, is not always or even frequently powdery, and it is most improbable that the maker of bronze would ever possess it, powdery or otherwise, since so far as is known the ore was smelted at the mine and it was only the metal that passed into commerce.

The principal references by the classical writers to British tin, excluding those to the doubtful and possibly mythical Cassiterides, are by Diodorus⁸ (first cent. B.C.), Julius Caesar⁹ (first cent. B.C.) and Strabo¹⁰ (first cent. B.C. to first cent. A.D.).

Diodorus states that the tin ore mixed with earth was dug out of rocky ground, which suggests vein ore, though the statement is so very ambiguous that alluvial ore is not excluded. Thus in one locality in Cornwall the alluvial gravels are beneath some

¹ W. R. JONES, *op. cit.*, 141, 142.

² *Geography*, III, II, 9.

³ *Ora Maritima*, I, 90.

⁴ F. HAVERFIELD, *op. cit.*, 20.

⁵ F. HAVERFIELD, *op. cit.*, 20, 21.

⁶ *Tin Mining in Spain Past and Present*, London, 1897. Quoted by HOOVER in the translation of Agricola's *De Re Metallica*, London, 1912, 411.

⁷ London, 1920, 113.

⁸ *Historical Library*, V, 11.

⁹ *De Bello Gallico*, v, 12, 5.

¹⁰ *Geography*, III, II, 9.

50 ft. of sand and silt and in another place they are covered with peat, gravel and sand to a depth of 20 ft.¹

As may be seen from the references given, the direct evidence for early tin-mining in Britain is very scanty and only carries it back to the first cent. B.C., or to the fourth cent. if Diodorus' description of Cornish tin-mining was derived from Pytheas, as may have been the case, or to the fifth cent. if the Cassiterides were part of Britain². In the absence of direct evidence, therefore, circumstantial evidence, both for the origin and also for the date of tin-mining in Britain, may be considered. The origin will be dealt with first.

Manifestly the ancient bronze objects found in Britain, the earliest of which are usually dated to the first half of the second millennium B.C., must either have been imported or else made locally or both. Let each of these possibilities be considered.

Importation of bronze might either have been in the form of finished objects, such as weapons and ornaments, or of ingots of metal to be fashioned locally into the objects desired, or of both. But the mere importation of bronze, whether objects or ingots, could not possibly lead to the mining and smelting of tin ore, unless it were accompanied by a knowledge of the composition of bronze, its mode of manufacture, the appearance and likely location of tin ore and the method of producing the metal from it. This knowledge neither invaders, using bronze weapons, nor traders, having bronze to barter, would possess, more especially the knowledge of the position of the British tin ore, and if the invaders or traders came from Northern Europe to one of the nearest points on the British coast, which would be somewhere on the east or south-east, this would be far removed from the tin ore region.

Importation of bronze is often denied on the grounds that the types of objects found are local and that moulds for casting bronze objects have been discovered, but both these objections are met by the assumption that the bronze imported might have been in the ingot form, with the exception of some comparatively few weapons and ornaments in the first instance, which would serve as object lessons of the superiority of bronze over copper and as an inducement to make it. Local production of bronze must necessarily have been preceded by an acquaintance with this alloy and also by tin-mining, unless tin were imported into Britain, which is so very improbable that it need not be taken into account. Also, before there could be mining the position of the ore deposits and the manner of treating the ore to produce the metal would have to be known.

Neither of the possibilities considered therefore accounts for the origin of tin-mining in Britain and the only adequate explanation is that a people familiar with both bronze and tin and having a practical knowledge of tin ore, including its appearance and the methods of mining and smelting it, came to Britain to prospect either for tin ore or for gold, with which tin ore is so frequently associated, and having found tin ore proceeded to mine and smelt it. Such a people are not likely to have come from so far afield as the East, but rather from Spain-Portugal or France, in both of which countries such knowledge is believed to have existed at an earlier date than in Britain, and it has already been suggested that Brittany was probably the place of origin of the discoverers and first workers of British tin ore.

The only alternative is to suppose that at first bronze (made by smelting associated ores of copper and tin) and later metallic tin were discovered in Britain and almost necessarily therefore also in Spain-Portugal and France (to mention only the countries

¹ G. M. DAVIES, *op. cit.*, 28, 29.

² Herodotus, III, 115.

that are being considered) much in the same manner as in the East, but quite spontaneously and independently, which, though not impossible, is very improbable and contrary to the little evidence that exists.

As regards the date of the beginning of tin-mining in Britain the following points may be considered. Assuming that tin was discovered in the East some time after bronze was first accidentally made and that from the East the knowledge of both bronze and tin spread indirectly to Britain, then since bronze in the East can be dated to about the third millennium B.C. and in the West to the second millennium B.C., and tin in the East to the second millennium B.C., it follows that tin-mining in Britain is not likely to have begun at the earliest before the end of the second millennium B.C. or the beginning of the first millennium B.C. and more probably in the second half of the first millennium. The acceptance of an earlier date for the commencement of the Bronze Age in Britain is in no way opposed to this, since as already shown, any bronze, whether objects or ingots, brought by invaders or traders would not lead to tin-mining, and it would only be after the advent of the prospectors for gold or for tin ore (who if they came in the first instance for tin ore would necessarily be bronze users) that tin-mining would be undertaken.

To account for the trade in tin from the West to the East that certainly existed from at least the fifth cent. B.C. there seems only one explanation that is adequate, namely that the original supply of ore in the East was proving insufficient, which implies that the deposits were small and were becoming exhausted. If such were the case search would naturally be made elsewhere, though it is not suggested that tin ore was originally found in the West as the result of deliberate search. Another possible explanation, however, is that the manufacture of bronze may have shifted from the original locality where copper ore and tin ore were found in close proximity to one another to some place where copper ore occurred alone.

It cannot be imagined that the early traders (Phoenicians or others as the case may be) knew that in the West there were countries where tin ore was obtainable and that they searched until they found it. At the most it could only have been hoped that such countries might exist, and it is far more likely that the early voyages round the Mediterranean, if not simply for loot of any sort, were impelled by the lure of gold and were in no way influenced by a search for tin.

Where tin is mentioned as having been obtained from Spain-Portugal or Britain it always appears to be the metal and not the ore that is meant, which indicates that the ore was smelted where found and this is confirmed by the statements of Diodorus¹ and Pliny².

In the outline presented of the early history of tin there are several important links in the chain missing, which only hypothesis can supply, namely, whether it was vein or alluvial ore that was first used and, if the former, what caused the change from vein ore in the East to alluvial ore in the West. To assume that the ore first employed was alluvial raises the difficulty that this kind of ore is not found associated with copper ore and thus the discovery of bronze would be made less accidental and more complex and almost necessarily later than the production of metallic tin. On the other hand to assume that vein ore was always employed is to ignore the very definite evidence of the early use of alluvial ore in Spain-Portugal, Brittany and Britain. These points will be considered when dealing with bronze.

¹ *Historical Library*, v. 11.

² *Natural History*, xxxiv. 47.

Bronze.

The word bronze as used to-day has a wide meaning and includes a number of different alloys consisting wholly or largely of copper and tin, but in some cases containing also small proportions of other ingredients, among which zinc, phosphorus and aluminium may be mentioned. Early bronze, however, was much simpler and consisted only of copper and tin with traces of such other ingredients as happened to be present in the raw materials employed. At a later date an addition of lead was sometimes made, but such an admixture, although of the bronze class, is not a typical or normal bronze. At the present day ordinary bronze contains about 9 to 10 per cent. of tin, but ancient bronze is more variable, the proportion of tin ranging from about 2 per cent. to about 16 per cent.

The date of the discovery of bronze is uncertain. It was probably about the third millennium B.C., and although a foreign importation it was used in Egypt about the Twelfth Dynasty (2000 B.C. to 1788 B.C.) and even possibly earlier¹.

The simplest assumption to make with regard to the discovery of bronze is that it was an accident, and there are only four possible ways in which it could have happened, namely, first, by fusing together metallic copper and metallic tin; second, by smelting a mixture of copper ore and metallic tin; third, by smelting the naturally-occurring combined mineral of copper and tin (stannite); and fourth, by smelting either a naturally-occurring or artificially-made mixture of copper ore and tin oxide. The first two methods are out of the question, unless tin was known before bronze, and the little evidence available points to a later knowledge. The third method is most improbable, not only because the combined copper-tin mineral, stannite, occurs only in small quantities and in a few localities and because, if it had ever been employed, it could never have led either to the use of the principal and only important ore (cassiterite), for the use of which at a later period there is ample proof, or to the production of metallic tin, but also because the resulting bronze would have contained a much larger proportion of tin and more sulphur than is found in early bronze². One is thrown back therefore on the fourth method, that is the smelting of a naturally-occurring or artificially-made mixture of copper ore and tin oxide. Such a mixture, if artificial, need not necessarily have been intentional and might have occurred from the accident of the two ores being found side by side or at any rate in close proximity to one another, as is the case in certain places.

The matter, however, is not quite so simple as might appear at first sight. Thus the tin ore that is associated with copper ore is the vein and not the alluvial form. The use of vein ore, as already pointed out, raises the difficulty that this was not the kind of ore employed when the western sources of tin appear on the scene and hence an explanation is required for the jump from vein ore in the East to alluvial ore in the West. The simplest suggestion is that both forms occur in the East and that although the vein ore was originally used (at first in the form of an unintentional and unsuspected admixture with copper ore), the alluvial ore afterwards became known and from this tin was prepared and that when the alluvial gravels of Spain-Portugal, Brittany and Corn-

¹ A. LUCAS, *Ancient Egyptian Materials*, 1926, 74-77.

² Stannite is smelted on a small scale at the present day in one locality in China and produces a metal containing almost equal proportions of copper and tin, as is only to be expected from its composition. G. M. DAVIES, *op. cit.*, 86.

wall respectively were being searched for gold the tin mineral was also found and recognized. But this only carries the matter part way and there is still a gap between the original vein ore and the original alluvial ore. To bridge this gap it is further suggested that if a mixed copper ore and vein tin ore were used, sooner or later a mixture very rich in tin ore would have been smelted, when the resultant alloy instead of being the usual bronze containing only a comparatively small proportion of tin would have been a white metal consisting chiefly of tin and containing only a little copper. One specimen of such an alloy of Nineteenth Dynasty date has been found in Egypt, which contains 76 per cent. of tin and 16 per cent. of copper¹. Thus it would be seen that bronze contained a white metal in addition to copper. In some such manner, therefore, tin might easily have become known without having been prepared in the pure state. If at a later period tin oxide were found during a search for gold, the heavy pebbles might have been smelted experimentally, since heating a mineral with charcoal would by that time have been a well-known process, and so pure tin might have been discovered and recognized as the ingredient required for making bronze.

To assume that the alluvial ore was employed to make bronze in the first instance would mean an intentional admixture of copper ore with an extraneous material that had no connexion with it and that would have to be obtained from another and possibly even a distant locality, which is very unlikely.

In the writer's opinion it is extremely probable that vein tin ore was used at first to make bronze, originally only in a natural and accidental admixture with copper ore and afterwards intentionally mixed, but not until a very late period as a source of metallic tin, and that alluvial tin ore was a later discovery than bronze and was never used directly for making this alloy, but only as a source of tin, after the discovery of which and when probably the naturally-associated ores first employed had become exhausted, bronze was made, as it is to-day, directly from metallic copper and metallic tin. As a corollary to the foregoing it would follow that during the first period, when vein tin ore was used blindly, the proportion of tin in bronze would be largely a matter of chance, though it would generally be small, since where copper ore and tin ore are associated the latter is usually in the smaller quantity. When, however, the nature of the vein tin ore was dimly perceived and more particularly after metallic tin was regularly produced from alluvial ore, the tin content of the bronze could be accurately fixed. It may be pointed out further that the various stages suggested as having occurred in the early history of bronze would have required the lapse of several generations at least between the first accidental bronze with a chance and varying proportion of tin and the intentional and considered alloy containing about 9 or 10 per cent. of tin.

The problem of the place of origin of bronze may now be discussed, and it resolves itself into a search for a country (*a*) where bronze was known at an early date, probably about the third millennium B.C.; (*b*) where copper ore was being smelted to produce copper, a country therefore no longer in the Stone Age, but in the Copper Age; (*c*) where tin oxide occurred in veins side by side with copper ore, this latter probably being malachite, since this is the ore that generally occurs on the surface and hence the one first employed, and it is the ore most easily reduced to metal; (*d*) where there was early commercial intercourse with Egypt, either direct or indirect, since from Egypt the knowledge of copper was derived and to Egypt was passed back part at least of the

¹ Berthelot, in *Fouilles à Dakhour*, J. de Morgan, 1895, 141.

newly-discovered bronze and (*e*) where the deposits of tin ore were probably very small and comparatively soon became practically exhausted.

The only two countries, so far as is known, where tin ore is found and that also fulfil most of the other requirements of the case are Armenia and Persia, in both of which tin ore occurs and both of which are very rich in copper ore. In Persia it is stated that in the province of Khorasan alone there are between 200 and 300 ancient copper workings¹. One objection that might be urged against these countries is that no bronze objects of such early date as that required by the hypothesis have been found, but it should be remembered that very little systematic archaeological excavation has yet been carried out. A further objection in the case of Armenia is the lack of early commercial intercourse with Egypt, such as took place between Egypt and Persia. All the evidence therefore points to Persia as having been the country where bronze was discovered.

¹ MOUSTAFA KHAN FATEH, *op. cit.*

MISCELLANEA

By PERCY E. NEWBERRY

I. A Middle Kingdom Mayor of Byblos.

The two scarab-shaped seals¹ given in Figs. 1 and 2 bear inscriptions naming a *hstj-c n Kpn*, "Mayor of Byblos," the famous port of the Lebanon on the coast of Syria. From their style I should be inclined to date them to the period immediately following the Twelfth Dynasty, but it is possible that they may be as early as the reign

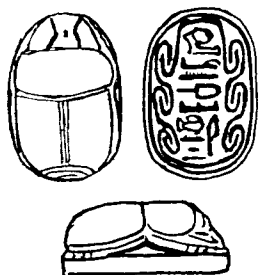


Fig. 1. Scale 1/2.

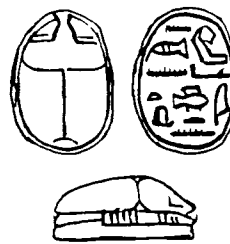










Fig. 2. Scale 1/2.

of Amenemmes III. It is not known where they were found, but it may well be that they came from the cemetery of Byblos, where many monuments of the late Twelfth Dynasty have recently been unearthed by French excavators and have come into the hands of the antiquity dealers. The writing of the name *Kpn* differs in the two specimens; in the first example it is , which is identical with that of the Berlin Papyrus 3022 (GARDINER, *Notes on the Story of Sinuhe*, 20); in the second example it is , which, as far as I am aware, has not been found elsewhere. The writing of the name of the official also varies on the two scarabs; in one it is , in the other ².

II. A new Vizier of the Eleventh Dynasty.

Dr. Bull published in this *Journal* (x, 15) a note on a new vizier of the Eleventh Dynasty, by name Apa. Another unchronicled vizier of this period was , Bebi, whose figure appears upon a slab in the British Museum (No. 724) from the Temple of Nebhepetrē Mentuhetep at Dēr el-Baḥrī. In NAVILLE-HALL, *The Eleventh Dynasty Temple at Deir el Bahari*, Part I, 7, this Bebi is described as , but on the slab the lower half of the -bird is plainly visible. It is probable that earlier in his career Bebi filled the office of , "Chancellor," for one of that name is referred to on a stela of the Mentuhetep period in the Metropolitan Museum of Art, New York (Inventory No. 14.2.7).

¹ I acquired these two scarabs in the spring of 1924, and have given the first example to the Ashmolean Museum at Oxford and the second to the British Museum (No. 57383 in the Egyptian Collection).

² An unintelligible sign stands here.

III. A new Vizier of the Nineteenth Dynasty.

I noticed last spring in a dealer's shop in Cairo a shawabti figure, with projecting skirt characteristic of the Nineteenth Dynasty, of a $\overline{\text{ḥ}} \text{ḥ} \text{ḥ} \text{ḥ}$, "Governor of the city and vizier," named $\text{ḥ} \text{ḥ} \text{ḥ} \text{ḥ}$, Authy. In a second dealer's shop in the same city I saw another monument of the vizier (his name here was written $\text{ḥ} \text{ḥ} \text{ḥ} \text{ḥ}$), on which he is described as son of the $\text{ḥ} \text{ḥ} \text{ḥ} \text{ḥ}$ *sib* Bastet.

IV. A Label of the First Dynasty.

In a paper printed in the *Proc. Soc. of Bibl. Arch.*, 1912, 278-289, I noted that the wooden and ivory tablets of the First Dynasty were really labels for objects that had been placed in tombs. One of these, however, did not apparently conform to the rest, for it was only known to bear a year-name of King *Wdymw* (Den), and there was, so far as I then knew, no object-name upon it. It was in the MacGregor Collection and came up for sale in 1921. I then had an opportunity of carefully examining it and found upon the back the engraved sign for a pair of sandals (see Fig. 3). This ivory label, therefore, was made for *Wdymw's* sandals, which, along with other articles of his apparel, must have been placed in his tomb. It is now in the British Museum (No. 55586 in the Egyptian Collection).

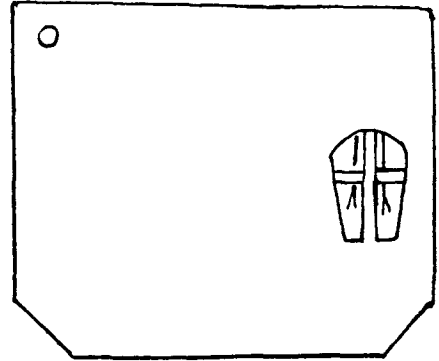


Fig. 3. Scale $\frac{1}{2}$.

V. Two Gold Button-Seals.

The gold button-seal Fig. 4 was bought at Luxor in 1912 by a friend who allowed me to make a drawing of it, but very shortly afterwards it was stolen and has not yet

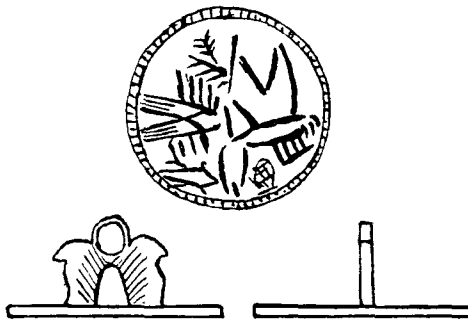


Fig. 4. Scale $\frac{1}{2}$.

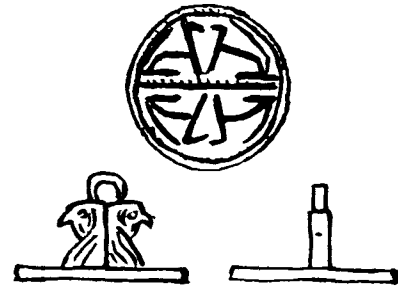


Fig. 5. Scale $\frac{1}{2}$.

been traced. At the top are two falcon's heads back to back with a ring for suspension between them. On the base are engraved a bee or hornet, a fly, a lizard, and a tortoise (?). This gold button-seal closely resembles one that was in the Hilton-Price Collection and was given to me by the late Lord Carnarvon, except that the design on the base consists of four Set-animals arranged in pairs facing one another (Fig. 5).

VI. An Official of King Horemheb.

The British Museum Ostrakon No. 5624, recently published by Dr. BLACKMAN in this *Journal* (xii, 177), mentions under the date Year VII of King Zeserkheperre-Horemheb, a major-domo of Ne (𓏏𓏏𓏏𓏏) named Tuthmosis. This official appears again in a hieratic inscription written on the right-hand wall of the lower rectangular chamber of the tomb of Tuthmosis IV in the Bibân el-Mulûk at Thebes. The latter inscription is dated in the third month of the summer season of the Year VIII of Horemheb, and records the order of the king that the Overseer of the Works in the Place of Eternity (*i.e.*, the Necropolis) Maÿ and "his assistant the Steward of Thebes (𓏏𓏏𓏏𓏏𓏏𓏏𓏏) Tuthmosis" renew the burial of King Tuthmosis IV. This inscription has been published by me in CARTER-NEWBERRY, *The Tomb of Thoutmosis IV* (Theodore Davis series), 1904, xxxiii-xxxiv.

VII. The High Priest Dhutihetep.

In the Metropolitan Museum of Art, New York, there is a very fine lapis lazuli seal (see Fig. 6) of the High Priest of Thoth named Dhutihetep. This Dhutihetep is certainly the same person whose famous tomb at El-Bersheh was published by me in *El Bersheh*, Part I.



Fig. 6. Scale 1.

SOME POTSDHERDS FROM KASSALA

By J. W. CROWFOOT

With Plate xiii.

The town of Kassala lies a mile or two west of the many-domed mountain mass from which it takes its name, but the only antiquities which have been found in the neighbourhood are on the other side of the mountain at the north-east end. Here there is a secluded recess which is littered with great quantities of ancient, unpainted, handmade potsherds. The place is almost completely encircled by hills, but at the northern end a camel track leads to it along a gully, and motors can approach it from the south-east, past a few tombs of unknown date and a little stretch of cultivable land. The site covers some acres of broken ground, seamed with deep-cut watercourses, and the pottery is particularly abundant on the higher ridges and close to the boulders of rock which have fallen from the mountain. No traces of building are visible and there is no sign of the artificial accumulation which would result from prolonged occupation, but the abundance of the pottery and the nearness of good, cultivable land indicate that the place was occupied for a few generations at least by sedentary folk, and I picked up a few stone grinders and pounders like those which have been found on the sites of other old settlements in the Sudan. The Hallenga who are regarded as the aborigines of Kassala call the spot the place of Daqlianūs, maḥal Daqlianūs, but they have no traditions about it of which I could learn.

A number of potsherds which I brought from the site in 1917 are now in the Gordon College museum: those which are published in this paper were collected in 1926 and are now in the Ashmolean at Oxford.

These potsherds fall into two main groups, a small group which shows foreign influence, and a much larger group which is characteristically African in material, shape and decoration. I turn to the smaller group first.

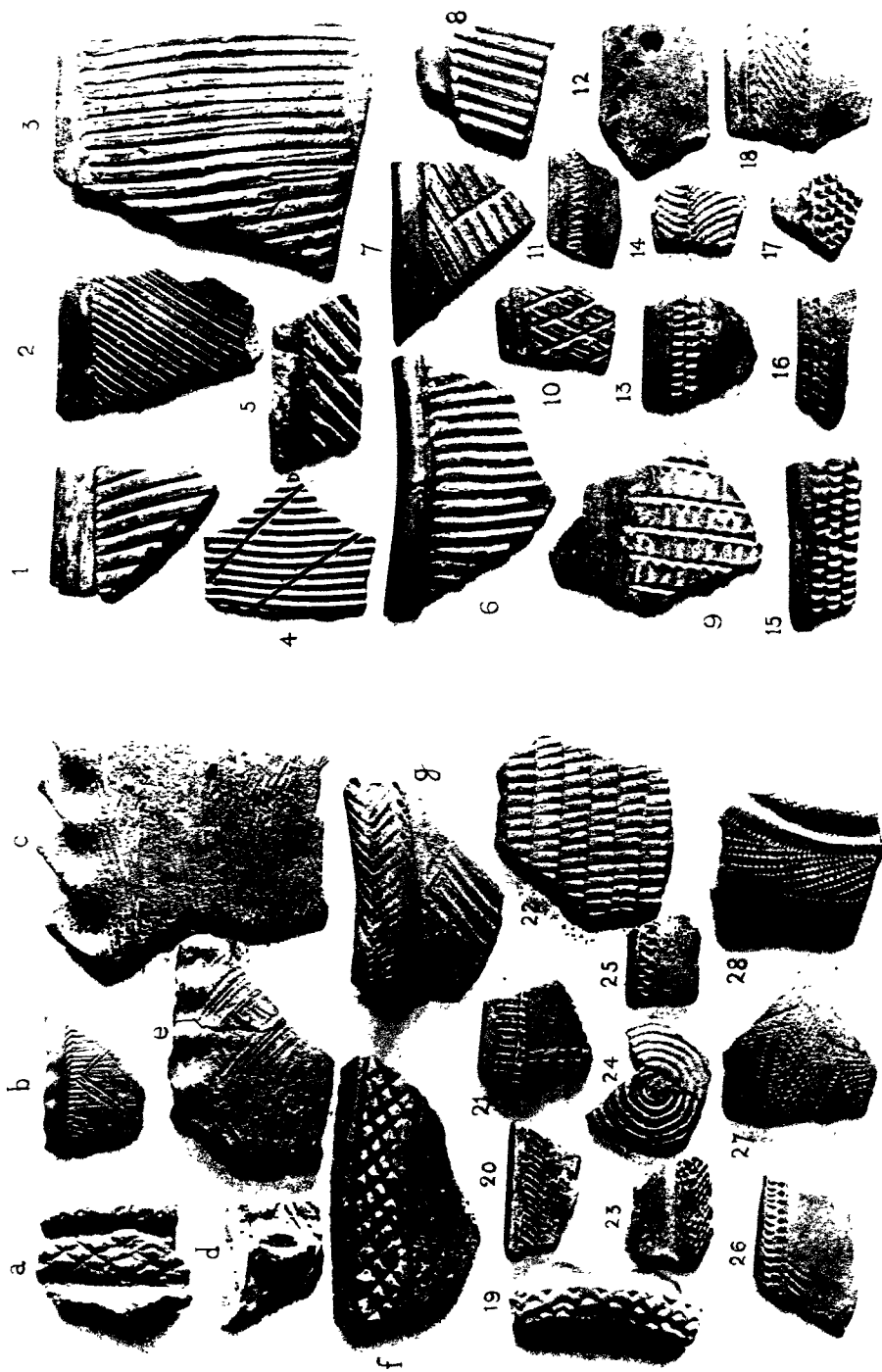
Group I. Pl. xiii, Nos. *a-g*.

The seven pieces shown are all made of the same material, an impure clay containing many particles of quartz. In fracture the clay is a slaty grey colour in the centre and a light brick pink on the two faces except where it has been accidentally darkened in the baking.

One piece, no. *b*, comes from a small bowl, no. *f* comes from a large, heavy, shallow dish, and all the others from large jars. All the pots were made by hand, not thrown upon a wheel.

Before other decorations were added, all the vessels seem to have been scored with a blunt-toothed comb both inside and outside: most of the combings run horizontally, and they constitute a distinctive characteristic of the ware. Other decorative features are as follows:

No. *a* has a coarse collar below the top and this collar is decorated with a lattice pattern which looks as if it had been cut with a metal blade. The same lattice pattern



Potsherds from Kassala in the Sudan.

Scale about $\frac{1}{2}$.

recurs twice on no. *f*, on the border on the outside of the dish and on the flattened top of the rim, which is not shown in the illustration.

Nos. *b*, *c* and *e*. The tops of these jars were pinched between the thumb and finger and dented so as to form a wavy edge.

No. *d*. The knob will be observed.

No. *g* had a bulging rim which is almost circular in section and is decorated with a chevron or herring-bone pattern.

In many respects this ware is foreign to other East African wares, but one can hardly think that large coarse vessels of this kind were carried from a distance to Kassala, and the material of which they are made looks like a local product. It seems probable that they were made on the spot in a factory directed by people familiar with the appearance of similar productions elsewhere and getting this appearance imitated as best they could in local clay and hand technique.

Group II. Pl. xiii. Nos. 1-28.

The potsherds of this group are much more varied than those of the first, but none of them presents features which are foreign to East African traditions.

The material of these pieces varies considerably: in some the clay is very coarse and contains large particles of quartz, in others it has been carefully ground or sifted. It varies also in colour: along a fractured edge some pieces show black or grey, others brown, pinkish or yellow, and in many the colour in the centre is different from that near either face. These differences will not surprise anyone familiar with African ceramics, ancient or modern. The varieties in colour and facies come partly from the varying proportions of organic matter which individual potters mixed with their clay, partly from different ways of preparing the clay itself, and partly from differences in the baking caused by the varying degree of heat in the fire, the length of time it burned and the position of the pots in the kiln. The relative uniformity of Group I suggested that we were dealing with the products of a single, more or less regulated, workshop: the variety in Group II shows that these pieces are the work of a number of different potters, some much more careful than others.

Nos. 1 to 10 come from wide-mouthed bowls with plain moulded rims. Below the rim the body of the bowls was decorated with a series of bold grooves: on nos. 3, 4 and 6 the main grooves run perpendicular to the rim, on nos. 1, 2, 5, 7 and 8 they are slanting, on no. 9 a series of horizontal lines has been crossed by a perpendicular series, on no. 10 the grooves form a lattice. This use of deep grooves is to be noted as a favourite trick of the Kassala potters. A second characteristic trait is the decorative use of two colours: the inner face of all the pieces except no. 8 is, like the rims, black and wet-smoothed or pebble-polished: nos. 2 and 7 are black on both sides, no. 8 reddish on both sides, but all the others are a dull brown or reddish colour on the outer face below the black rim. In some pieces the black colour forms as it were a mere skin on a brownish paste, and on these it must have been produced either by a smear before burning or by the application of some organic matter immediately after the burning while the pots were still red-hot: the black colour on the all-black pots may have been produced by smothering the kiln—all three methods being in use to-day in various parts of the Sudan. One or two pieces, not shown, were decorated with impressed lines filled with red or white colouring matter.

No. 11 comes from a small bowl of much finer workmanship. The paste is grey, the inner face and the part outside above the band of impressed ornament are black, the part

below this band is a crimson red. The red on this sherd and on the top edges of nos. 20 and 26 has been produced, I think, by a ferric smear: the black on nos. 11 and 13 has a metallic sheen and leaves a grey smudge when rubbed with a handkerchief, both characteristics of pottery which has been treated with some sort of blacklead. On no. 16 the usual colour arrangement has been reversed, the band with impressed triangles being reddish and the part below it black. Nos. 27 and 28 are interesting because they have been decorated with a blunt-toothed rocker, a method of decoration which has a long history in the Nile valley.

Do these fragments of pottery form a new archaeological group or can they be related to any of the fabrics known in the cultural areas which lie nearest to Kassala, namely, the realm of Axum which is some 200 miles to the south-east, or the Nile valley which is even further away to the west?

The German expedition to Axum found a quantity of potsherds, and others have been found by the Italian archaeologists who have explored various sites in Eritrea: superficial resemblances between the Kassala ware and some from the Eritrean Rore published by M. Conti-Rossini (*Reale Accademia Nazionale dei Lincei*, xxxi, 1923) led me to submit a series of these potsherds to him. M. Conti-Rossini was kind enough to examine them and to give me his considered opinion. The coarse red pottery in Group I, he tells me, resembles a class of Graeco-Roman origin which is found in Ethiopian ruins of the Axum period, for example, at Adulis which was excavated by M. Paribeni, who has also kindly examined the Kassala ware. Of the pottery in Group II M. Conti-Rossini speaks with more hesitation, writing as follows of the characteristic pieces included in Fig. 2, nos. 1 to 10: "C'est la véritable poterie de Cassala: c'est elle qui présente les difficultés plus sensibles. Après y avoir longuement réfléchi, j'y vois une évolution locale d'un type éthiopien." Zahn's account of the pottery found at Axum corroborates this cautious judgement: he describes the various wares at Axum in terms which are verbally applicable to our group (*Deutsche Aksum-Expedition*, Berlin, 1913, II, 199, 201, 205 ff.) and publishes two fragments "mit wagrechten kräftigen Rippen" and a third which is red on the outside and brown on the inner face (nos. 70, 71 and 79). The material is scanty but, so far as it goes, it justifies M. Conti-Rossini in summing up the typical Kassala ware as "une variété, une élaboration de types d'Aksoum."

There are also parallels on the Nubian side which must not be overlooked. In the first place, Kassala Group II has certain distinctive characteristics in common with a whole series of ancient and modern Nilotic fabrics: secondly, one or two potsherds have been found in Nubia which are almost identical in decoration with the Kassala pieces.

Among the general characteristics it will be enough to note the following:

(a) The absence of handles, spouts and knobs for suspension. This is a feature of early Nubian ware and, with some qualifications, of predynastic Egyptian pottery, and is in marked contrast to the early appearance of spouts and handles in the Mediterranean. It is still characteristic of uncontaminated East African ware (STUHLMANN, *Handwerk und Industrie in Ostafrika*, Hamburg, 1910, 26).

(b) The decorative use of two colours on the same pot, black on the rim and the inside, red on the lower part of the outside, which is characteristic of early Egypt and of Nubia from the Middle Kingdom to the Meroitic age. The use of blacklead to give a metallic sheen is found to-day in the Baḥr el-Ghazâl (*Sudan Notes and Records*, VIII, 1925, 135) and in the Twelfth Dynasty at Kerma (REISNER, *Kerma*, II, 329).

(c) The use of the rocker. Reisner (*op. cit.*, 381) writes that this occurs "in the

Nubian C-group and in all subsequent periods in Ethiopia at present known to me down to the late Meroitic period": in the present day it has survived in the Baḥr el-Ghazāl province and in the south of the Nuba Mountains.

These are general characteristics, and they are only significant because they are found in an area which it is reasonable on general grounds to connect with Kassala. The closer parallels to which I referred come from sites in Lower Nubia: at Aniba fragments decorated with bold grooves like the Kassala ware were found by MacIver (*Afrika*, 1909, Pl. x), and at Faras one piece which might have come from Kassala was found by Griffith (*Liverpool Annals*, VIII, 1921, Pl. xii, no. 21). The latter piece was found, Professor Griffith tells me, in the filling of a pit of a C-group grave, and he describes it in the text as "an example of domestic ware used for cooking which has strayed into the cemetery and may be later." MacIver's finds apparently belong to the Eighteenth Dynasty. The band ornaments on the smaller sherds from Kassala, again, may be compared with another Faras fragment (*op. cit.*, XIII, Pl. xvii, no. 5) and might be regarded as degenerate survivals of the borders round the beautiful black-topped bowls from the Nubian cemetery at Kerma. On the other hand it must be admitted that the common handmade wares in Lower Nubia, whether of the Meroitic or earlier periods, do not furnish an exact parallel to the Kassala group.

The evidence quoted in the last paragraphs suggests that the relationship between Kassala and Nubia is very similar to the relationship between Kassala and Axum, and it seems to me that a parallel to these relations can be found in the Southern Sudan to-day: here there are several local varieties of handmade ware with marked characteristics which one can distinguish at a glance when one compares them together, but if one compares the whole group with the products of some distant area, such as West Africa or the Malay peninsula, where the processes of production may be much the same, it is obvious that the local varieties in the Sudan should be classified as members of a single family. It is suggested that it will be useful to classify the ancient fabrics of North-East Africa in the same way: Kassala ware will then be designated as a new local variety of a large family which includes the indigenous Axumite ware, several Nubian branches and some of the earliest Egyptian fabrics.

The approximate date of the Kassala fragments is indicated by the Graeco-Roman or Mediterranean characteristics of Kassala Group I. This indication is further corroborated by the complete absence at Kassala of any fragments recalling the characteristic shapes and decorations which came into vogue at Meroe and elsewhere in the Sudan after the Meroitic period proper. This post-Meroitic ware is best seen in the numerous narrow-necked globular beer-jars decorated with textile impressions which have been found on various late sites and are still made over a wide area, including not only the Central Sudan but Kordofan, Dongola and Kassala itself (*Journal*, XIII, 149-150, and Pl. xxxii). On the basis just proposed this post-Meroitic ware will be classified as yet another variety of the great North-East African family.

The date suggested is consistent also with all we know or can conjecture about this area from written sources. Procopius (*De Bello Persico*, I, 19, 59A quoted by Woolley and MacIver, *Karanog*, Text 102) says that it was a journey of thirty days for a light traveller (*εὐζώνων ἀνὲπι*) from Axum to the Roman frontier at Aswān, and the direct road would naturally pass through Kassala. The scanty historical references to the Eastern Sudan are mainly concerned with raids of Blemmyes or Axumites, but the existence of regular communications implied by Procopius, the relations which the Blemmyes entertained with Palmyra before the time of Diocletian, and the subsequent Byzantine veneer which they

acquired, prove that the desert tribes were not wholly refractory to culture. It is not surprising therefore to find that about this time there was a settled community at Kassala cultivating the ground and subject, at least indirectly, to Mediterranean trade influences. Graeco-Roman influences in the Nile valley are obvious in the Romano-Nubian pottery: the foreign influences which reached Kassala, though from the same original source, were different because they had come through Axum instead of Egypt. The modern name of the site appears to point to the same culture complex but it would be rash to base any argument upon it: the dwellers in the Nile valley corrupted Ptolemaios into Botlus, and Daqlianūs is more likely to be a corruption of Diocletianus than of some otherwise unknown name like Decilianus, but it would be hazardous to see in the name a reminiscence of the historical Diocletian in spite of his connexion with the Blemmyes. The name of Diocletian survived for a long time in Egypt and in the countries under Egyptian ecclesiastical influence because the Coptic era dates from his accession, and it seems to me likely that, being used in this connexion, it became a generic name for any place or person of remote antiquity among the Hallenga, some of whom may have been still Christian within the last century or two, like several tribes across the Eritrean frontier.

We may sum up the conclusions of this paper as follows:

In the early centuries of our era there was a settled community at Kassala which was in touch certainly with Axum and probably with the Nile valley: the pottery used by this community was made on the spot and decorated with tools and by processes which are familiar to us in several other places in this part of Africa. There is no evidence to show whether these people called themselves Blemmyes or Bega or by some other name.

Our knowledge of the past history of this area is so slight that even these meagre facts are welcome.



Sculptured slab No. 15,000 in the Berlin Museum.

NOTE ON THE SCULPTURED SLAB No. 15000
IN THE BERLIN MUSEUM

BY PERCY E. NEWBERRY

With Plate xiv.

In Pl. xiv is given a photographic reproduction of a small sculptured limestone slab, No. 15000 in the Berlin Museum. This has been published by Bissing-Brückmann in their *Denkmäler*, Taf. 83, and also by Schaefer-Andrae in their *Die Kunst des Alten Orients*, Berlin, 1925, 362. The scene upon it is said to represent "Amenophis IV mit seiner Gemahlin im Garten," but the female figure is certainly not Nefertiti, nor do I think that the male figure represents Amenophis IV. Both figures are shown with the royal uraeus upon the forehead, so it is clear that we have here a king and a queen. That they belong to the El-Amarnah period is, of course, certain, but do they represent Semenkharē and Merytaten, or Tutankhaten and Ankhsenpaten? The attitude of the young king wearily leaning upon a staff placed under his right arm-pit gives one the impression that he must have been a delicate youth, and this is further suggested by the little queen holding out to him a lotus bud and two mandrake fruits¹. The latter are very significant, for they are the well-known "love apples" that, in the Near East, are generally believed to have stimulating and exhilarating qualities. This belief is very ancient, for it is indicated in the passage about Rebecca in *Genesis* xxx, 14 ff., and even at the beginning of the last century it is recorded² that young Athenians were accustomed to wear about their persons small pieces of the roots of the mandrake enclosed in little bags as amulets for amatory reasons. I am inclined to think that this little scene represents Semenkharē and Merytaten rather than Tutankhaten and Ankhsenpaten, for the youthful king's features are not like those of Tutankhaten.

¹ Mandrake fruits have been found in the tomb of Tutankhamūn: see my paper on "The Floral Wreaths" in CARTER, *The Tomb of Tut-ankh-amen*, II, 192 ff.

² SIBTHORP, *Flora Graeca*, III, 16.

FIVE LEASES IN THE PRINCETON COLLECTION

BY H. B. VAN HOESEN AND A. C. JOHNSON

1. Lease of Palm Grove.

AM 8951.

Ἀὐρηλία Ἀμμωνάριον διὰ Νεικά[νο]ρο[ς. . .]
 φίλου. Παρὰ Ἐπιμάχου Κοττάρου μ[ητρὸς] Θεω[νίδος(?)]
 καὶ Σύρου Λογγίνου βουλόμεθα μισθώσασθα[ι]
 παρὰ σοῦ φοινικῶνα λεγόμενον . . . οὐ ἀπὸ τοῦ
 5 καρποῦ (ἔτους) θ' ἐκπίπτοιτος εἰς τὸ (ἔτος) ι' τοῦ
 ἐνεστότου ἔτους ἀργυρίου δραχμῶν
 ἑκατὸν ἑξήκοντα καὶ ταγῆς φοίνικος
 μονοξύλου ἀρτάβην μίαν ἡμισσον καὶ
 κάλλυνθρα δύο καὶ καλάτια ἑ τῶν ἔργων
 10 πάντων ὧντων πρὸς ἡμᾶς τοὺς μισθοσα-
 μένους ποτισμοῦ τε καὶ περιχοματισμοῦ
 [κα]ὶ ὀχίας καὶ κατασπασμοῦ(ς) καὶ παραδώ-
 [σομεν καθὼς καὶ ἡμεῖς] παρηλήφα[μεν] ἔαν
 [φαίνηται μισθώσασθα]ι. (2nd hand) Ἐπίμαχ[ος]
 15 [μεμίσθωμαι. (3rd hand) Σύρος μεμ[ίσθωμαι]
 [ὡς πρόκειται].

Aurelia Ammonarion acting through her agent Nicanor son of ...philus. From Epimachus, son of Kottaras and Theonis(?). and Syrus, son of Longinus. We wish to lease from you the palm grove called.....from the harvest of the current year, which is the ninth, extending into the tenth year, the rent being 160 drachmae, one and a half artabae of dates on single stems, two bunches, and five baskets. We, the lessees, shall undertake all the work of irrigating, ditching, pollinating, and picking and we shall hand back the grove in the same condition as we received it, if the lease is granted. (Here follow the signatures of the lessees, Epimachus and Syrus.)

This papyrus measures 12 × 13 cm. and is practically complete. The writing for six lines on the upper right-hand corner is very faint. The document may be dated on palaeographical grounds in the early part of the third century. Since the ninth year of an emperor's reign is specified, it must fall either in the time of Septimius Severus or Alexander Severus, probably the latter—*i.e.* 230. The spelling and syntax are equally bad.

Other leases of palm groves are *P. Hamb.* 5; *P. Ryl.* 172; *B.G.U.* 591, 862; *C.P.R.* 45, *P. Oxy.* 1632; *P. Cairo Byz.* 67100; *Sammelbuch*, 5126. Leases which include palm trees are *B.G.U.* 603, 604, 900, 1118; *P. Flor.* 369; *P. Hamb.* 68; *P.S.I.* 33, 296; *P. Oxy.* 639, 1631; *P. Cairo Masp.* 67104, 67170; *P. Lond.* 1695, 1769; *Sammelbuch*, 4483; *P. Cornell*, 10, 16.

1. The appearance of women in four out of five of the leases published here is interesting as evidence of the legal status of women in Egypt and the capacity of legal action which they enjoyed.

4. The name of the grove contained not more than five letters.
5. ἐκπίπτοντος κτλ. See *P. Hamb.* 5. introduction.
6. Sc. φόρου. The same rental is found in *B.G.U.* 603, 604.
7. ταγή as a measure is found in *B.G.U.* 1118, 1120.
9. For καλίτια read καλίθια.
12. On the culture of the date palm in Egypt see SCHNEBEL, *Die Landwirtschaft im hell. Ägypten*, 294 ff.
13. ἐὰν φαίνεται μισθώσασθαι. This formula is common in leases until about the middle of the third century. cf. BERGER in *Zeitsch. für vergl. Rechtswissenschaft*, XXIX. (1913), 320 ff.
15. The signature of the lessee appears in leases of palm groves or gardens only in *B.G.U.* 900; *C.P.R.* 45; *P.S.I.* 33, 296; *P. Oxy.* 1631; *Sammelbuch*, 5126. The lessor or agent signs in *P. Ryl.* 172; *B.G.U.* 603.

2. Lease of House.

Dep. 7549.

Ἐμίσθωσεν Ἀύρηλία Δημητροῦς Διο-
 μυσίου[[ς]] τοῦ καὶ Ἡρακλιανοῦ διὰ τοῦ
 ἀ[ν]δρὸς Ἀύρηλίου Σερήνου Σαραπίωνος
 ἀπὸ τῆς λαμπρᾶς [Ἰ]ξυρυγχειτῶν πόλεως
 τῶν ἐξ ἐφηβείας ἱερονείκων Ἀύρη(λίω)
 Ἀχιλλεῖ Ἐρμίου μητρὸς Ταδιογάτος ἀπὸ
 τῆς αὐτῆς πόλεως ἐπ[ὶ χρόν]ον ἔτη τρία
 ἀπὸ α' τοῦ ἐξῆς μηνὸς Θῶθ τοῦ ἰσιόντος
 ἔτους ἐν τῇ αὐτῇ πόλει ἐπ' ἀμφοδου Ἀυ-
 κίων Παρεμβολῆς οἰκίαν καὶ ἀλλήν σὺν
 [χρηστηρίοις πᾶσι κτλ.]

Aurelia Demetrous, daughter of Dionysius who is also known as Heraclianus, through her husband Aurelius Serenus, Sarapion's son, citizen of the illustrious city of Oxyrhynchus and victor in the sacred games as ephebe, has leased to Aurelius Achilles, son of Hermus and Tadiogas of the same city her house and court with all furnishings in the quarter of the Lycian barracks of the same city for a period of three years from the first of next month, which is Thoth, of the new year.

This fragment measures 7.8 x 10.5 cm. The latter part of the document is lost. It probably dates from the first half of the third century and is later than the edict of Caracalla as the names Aurelii imply.

1. The introductory formula of the so-called protocol lease is peculiar to Oxyrhynchus.

5. For victors at the sacred games for ephebes cf. *P. Oxy.* 1697, 1703, 1705. Endowments for ephebic contests are recorded in *P. Oxy.* 705 (A.D. 200-202), and we find mention of such games as late as A.D. 324 (*P. Oxy.* 12). Special privileges of immunity seem to have been granted to the successful contestants. Cf. *P. Lond.* vol. 2, p. 215; vol. 3, pp. 145, 165; SAN NICOLÒ, *Aegyptisches Vereinswesen*, 61; *Class. Rev.* VII. (1893), 476. On ephebic games see WILCKEN, *Grundzüge*, 143 ff.

9-10. Cf. RINK, *Strassen- und Viertelnamen von Oxyrhynchus*, 39 ff.

3. Lease of Farm.

AM 8946.

[Ἐμίσ]θωσεν Ἀύρηλία Ἀμμ[ωνάριον]
 [Θεο]δώρου μη[τρὸς] Πεναμ[ούτος ἀπὸ τῆς]
 λαμπρᾶς καὶ λαμπροτά[της Ὁξυρυγχιτῶν]
 πόλεως Ἀύρηλίω Ἰού[στω μητρὸς]
 5 Σατόρινης(?) ἀπὸ τῆς α[ὐτῆς πόλεως]
 [εἰ]ς ἔτη δύο ἀπὸ τοῦ [ἐνεστῶτος ἔτους]
 [τῆ]ν ὑπάρχουσαν αὐτῇ π[ερὶ κώμην]
 Ἡ[ρ]ακλείου ἄρουραν μ[ίαν ἢ ὅσας ἐὰν ᾖσι]
 [ἐκ γ]ε[ω]μετρίας [ὥστε σπεῖραι καὶ ξυλα-]
 10 [μῆσαι] οἷς ἐὰν αἰρήται [γ]ένεσι ἐκφορ[ί]ου
 [ἀ]πο[τ]άκτου κατ' ἔτος κριθῆς ἀρταβῶν
 δέκα ἀκινδύνου παντὸς κινδύνου
 τῶν τῆς γῆς κατ' ἔτος δημοσίων ὄντων
 πρὸς τὴν μεμισθωκοιῖαν (sic) κυριεύουσα
 15 πάντων καρπῶν ἕως τὴν κριθῆν
 ἀπολάβῃ. βεβαιωμένης δὲ τῆς
 μισθώσεως ἀποδότω τὴν κριθῆν
 τῷ Παῦνι μηνὶ νέαν καθαρὰν μέτρο
 δεκάτω ἀνυπερθέτως γινομένης αὐτῇ
 20 τῆς πράξεως ὡς καθήκει. Κυρία
 ἡ [μίσ]θωσις περὶ ἧς ἐπερωτηθεῖς
 ὁ μ[ε]μισθωμένος ὡμολόγησεν.
 (Ἔτους) β' Ἀυτοκράτορος Καίσαρος Γαίου
 Οὐαλερίου Διοκλητιανοῦ Εὐσεβοῦς
 25 Εὐτυχοῦς Σεβαστοῦ Τῦβι δ'
 Ἀὐρ(ῆλιος) Ἰούστος μεμίσθωμαι τὴν γῆν
 καὶ ἀποδώσω τὴν κριθῆν ὡς πρόκειται
 καὶ ἐπερωτηθεῖς ὡμολόγησα. Ἀὐρ(ῆλιος) Διο-
 [ν]ύσιος ἔγραψα ὑπὲρ αὐτῆς μὴ εἰδουείας (sic) γράμματα).

Aurelia Ammonarion, daughter of Theodorus whose mother is Penamus (?), a resident of the illustrious and most illustrious city of Oxyrhynchus, has leased to Aurelius Justus whose mother is Satorne (?), of the same city one aroura, or whatever the measurement may be by survey, belonging to her in the village Heracleion (?) for the term of two years from the present year with the right to cultivate and harvest whatever crops he chooses. The regular yearly rental shall be ten artabae of barley free from all risk, while the annual public taxes shall fall to the lessor who shall have ownership of all the crops until she receives the rental. If the lease is guaranteed, the lessee shall pay over new clean barley in the month Pauni according to the ten-measure standard without delay; and the lessor shall have the right of exaction according to law. This lease is valid. The lessee on being formally interrogated agreed. Dated the fourth of Tubi in the second year of the reign of Emperor Caesar Gaius Valerius Diocletianus Pius Felix Augustus.

I, Aurelius Justus, have leased the land and I will pay the rent in barley as agreed, and on being formally interrogated I have consented. I, Aurelius Dionysius wrote this agreement on behalf of the lessor as she is illiterate.

Measurements: 13×10 cm. The document is nearly complete except for the loss of the right-hand portion of lines 1-9. In the upper left-hand corner some of the letters are so faint that our reading is far from certain. Dated in the second year of Diocletian, A.D. 285.

1. We have here the Oxyrhynchus protocol form of lease in full, ending with date, signature, and repetition of the covenant clause of the lease.

2, 5. Πεναμούτος, Σατόρνης. These names are unknown, but masculine variants Πενάμις and Σατόρνος are quoted by PREISIGKE, *Namenbuch*.

8. The name of the village is highly problematical, as the traces of the letters are almost completely washed out.

19. The μέτρον δεκάμετρον consisted of ten measures, each of four *choenices*. This measure is rare in Roman times though known to metrologists. Cf. *P. Oxy.* 9 verso (p. 77). 85: *P. Fay.* 101; *P. Amh.* 147. also HULTSCH, *Archiv.* 2. 292 ff.

4. Lease of Rooms.

Dep. 7548.

[Τῷ δέϊνι τοῦ δείνος καὶ τῷ δέϊνι τοῦ δείνος κτλ.]
 Παρ[ά Α]ὐρηλίῳ[υ Παύλου τοῦ δείνος ἀπὸ τῆς λαμπρᾶς] καὶ λαμπροτάτης[]
 [Ὁξυρυχι]τῶν πόλεω[s. Ἐκουσίως ἐπιδέχομαι μισθώσασθαι]
 [ἀπὸ ἀ' τοῦ μ]ηνὸς Θῶ[θ τοῦ ἐνεστῶτος ἔτους]
 5 [ἀ]πὸ τῶν ὑπαρχόντων ὑμ[ί]ν[υ] ἐν τ[ῇ] αὐτῇ πόλει ἐπ' ἀμφόδου
 Δεκάτης ἀπὸ ὀλοκλήρου [ο]ικίας [. καὶ]
 τὸ ὑπερῶον καὶ τελείων [ὑμ]ίν[υ] ὑπὲρ ἐνοικ[ίου] κατ'
 ἔτος [έ]καστον ἀργυρίου δρα[χ]μὰς σξ' ἕπερ β[ε]βαιου-
 μένης μοι τῆς ἐπίδοχῆς ἑπανάγκες ἀποδώσο (sic)
 10 τὸ κατ' ἔτος ἐνοίκιον δι' ἕξαμήνου τὸ ἥμισυ χρώμενος
 [το]ῖς μισθωσί[σι] (sic) μοι τόποις ἐπὶ τὸν χρόνον ἀκωλύτως
 [μεθ'] ὃν παραδώσω ἀπὸ κοπρίων καὶ δίσσης πάσης καὶ ἄσ-
 [πε]ρ παραλάβω θύρας καὶ κλείς ἢ ἀποτίσσομαι οὐ εἰν μὴ
 [παρ]αδῶ τὴν ἀξίαν τιμὴν γενομένης ὑμῖν τῆς
 15 [πρά]ξεως παρά τε ἐμοῦ ὡς καθήκει. Κυρία ἢ ἐπ[ι]δοχῆ[ι]
 καὶ ἐπ[ε]ρωτηθεὶς ὡμολόγησα.
 Ὑπατείας Φλ.
 τῶν λαμπροτάτων ἐπά[ρχων]. Θωθ. . .

(2nd hand) Αὐρηλίος Παῦλος μεμίσθωμα
 [τόπο]υς οἰκία[s] καὶ ἀποδώσω τὸ
 [ἐνο]ίκιον ὡς πρόκειται καὶ
 [ἐπερ]ωτηθεὶς ὡμολόγησα.

From Aurelius Paulus...of the illustrious and most illustrious city of Oxyrhynchus. I voluntarily undertake to rent from the first of Thoth of the present year (certain rooms) and the upper room of the property belonging to you in the Tenth ward of the aforesaid city, and to pay you for rent 260 sil' er drachmae a year: which rental, if the lease is guaranteed, I shall pay in semi-annual instalments, enjoying the use of the leased rooms without hindrance for the period. On the expiry of the lease I shall restore the property clear of dung and all filth, and with it all the doors and keys which I shall have received; or else, I shall pay the just price for whatever I do not return. The right of exaction from me remains with you as is proper. The undertaking is valid and on formal question, I have agreed. In the consulship of Flavius.....most illustrious prefects. The first(?) of Thoth.

I, Aurelius Paulus, have rented the rooms and I will pay the rent as specified. On interrogation I have agreed.

Measurements: 23.3 x 11 cm. Mutilated at top and upper right-hand corner. The writing is faint and in a rather difficult hand of the late third or early fourth century.

3. We restore ἐπιδέχομαι rather than βούλομαι because of the use of ἐπιδοχή in lines 9 and 15. This formula is characteristic of Oxyrhynchus, cf. BERGER, *op. cit.*, 349; WAZYNSKI, *Die Bodenrecht*, 16.

8. House rents are usually stated in silver drachmae. The depreciation of the coinage is evident if we compare this rental with that of 60 drachmae asked in A.D. 183 (*P. Oxy.* 1127) and with the talents or myriads of drachmae named in the leases of the fifth century, cf. BERGER, *op. cit.*, 378 ff.

17. Φλ. Possibly Φλαυίου or Φλαουίων.

18. τῶν λαμπροτάτων ἐπάρχων κτλ. [This seems to me, from a photograph sent me, almost certain, though the hand is very cursive. H. I. B.]

5. Lease of Furnished House.

Dep. 7546.

Μετὰ τὴν ὑπατείαν Φλ(αουίων) Εὐχαιρίου
καὶ Συναγρίου τῶν λ[α]μ(προτάτων) Ἐπειφ ιη'
Φλ[α]ουίω Κρησπείνω ἀπὸ πραιποσ(ίτων)
γε[ο]υχοῦντι ἐπ[ι τ]ῆς λαμ(πρᾶς) καὶ λαμ(προτάτης) Ὁξυ(ρυγχειτῶν) πόλε(ως)
5 παρ[ᾶ] Ἀὐρηλίας Νόννας Ἀρτεμιδώρου
ἀπὸ τῆς αὐτῆς πόλεως. Ἐκουσίως
ἐπιδέχομαι μισθώσασθαι ἀπὸ α'
τοῦ ἕξῆς μηνὸς Μεσορῆ τοῦ
ἐνεστῶτος (ἔτους) ιε' ζ' γ' τῆς ια' ἰνδικ(τίωνος)
10 ἀπὸ τῶν ὑπαρχόντων σοι ἐν τῇ
αὐτῇ πόλει ἐπ' ἀμφόδου Δρόμου
Θοήριδος ὀλόκληρον οἰκίαν
σὺν χρηστηρίοις πᾶσι ἐνοικίου
κατ' ἔτος ἀργυρίου δηναρίων μυ-
15 ρ[ί]ας τετρακισχιλίας πεντακοσίας
ὡςπερ ἀποδώσω δι' ἕξαμή-
νου τὸ ἥμισυ καὶ ὀπ[ό]ταν
β[ουλ]ηθεί[ης παρ]αδώσ[ω σοι τῆ]ν αὐ-
τῆν οἰ[κίαν] [κα]θαρὰν [ἀπ]ὸ κοπρίων
20 κ[αὶ δέ]σης π[ίσ]σης ὡ[ςπερ παρ]εἶλιφα.
Κ[υρ]ία ἢ μί[σ]θωσις [κα]ὶ ἐπερ(ωτηθεῖς)
ὡμολόγη(ησα)

Ἀὐρηλία Νόννα Ἀρτεμιδώρου
μεμισθῶμαι τὴν οἰκίαν καὶ ἀπο-
25 δώσω τὸ ἐνοίκιον ὡς πρόκ(εῖται).
Ἀὐρηλιος Δωρ[ό]θεος Νίλου ἔγραψα
ὑπὲρ αὐτῆς γράμματα μὴ εἰδυείης (sic).

In the year following the consulship of the most illustrious Flacii. Eucherius and Syagrius, on the 18th of Epiph. To Flavius Crespius, ex praepositus, landholder, of the illustrious and most illustrious city of Oxyrhynchus. From Aurelia Nonna, daughter of Artemidorus of the same city. I voluntarily undertake to lease from the 31st of next month, which is Mesore, of the current year, which is the 15th (of Gratian), the 7th (of Valentinian II), the 3rd (of Theodosius), and is the 11th year of the indiction, your entire house with all its furnishings situated in the quarter of Thoreris Place in the aforesaid city. The annual rental shall be 14,500 silver denarii, which I shall pay in semi-annual instalments, and whenever you shall desire, I shall surrender the property clear of dung and all filth in the same condition as I took it over. This lease is valid, and on formal interrogation, I have agreed to it.

I, Aurelia Nonna, daughter of Artemidorus, have leased the house and shall pay the rent as agreed. I, Aurelius Dorotheus, son of Nilus, wrote this on her behalf as she is illiterate.

Measurements: 27.7×19.7 cm. Complete except for small gaps in lines 18–21. Dated in the year following the consulship of Eucherius and Syagrius, Epiph the 18th, i.e., July 12, A.D. 382.

3. ἀπό πραιποσ(ίτων) = *ex praepositis*. Cf. *P. Gen.* 16 (A.D. 345), 4^o (ca. A.D. 350), *P. Oxy.* 1973 (A.D. 420). The title is more common in documents of the sixth century (*P. Flor.* 281; *P. Lond.* 1687; PREISIGKE, *P. Cairo*, index, s.v.). It is given more fully in *P. Cairo Masp.* 67296, 15 as ἀποπραιπ. καστρῶ. In references to the officials *ex praepositis* or *praepositi* in documents later than A.D. 415 we must understand that either the *praepositus castrorum* is meant (*P. Cairo Masp.* 67296, 3 note), or, as Bell suggests (*P. Lond.* 1687, 23 note), the *praepositus limitis*, rather than the *praepositus pagi* of whom there appears to be no record in Egypt after A.D. 411 (GELZER, *Studien zur byz. Verw. Aegyptens*, 57, 96). In earlier documents, however, the latter official has been generally understood whenever the title *praepositus* is mentioned without further definition (*P. Amh.* 115; PREISIGKE, *P. Cairo*, 6; *P. Lips.* 111; *P. Thead.* 52). Oertel's general attribution of police duties and powers to this official is based chiefly on this assumption which we believe to be questionable. References to the *praepositus* may be classified as follows:

(1) Documents where direct reference is made to the *praepositus pagi* or to his duties in the village. Cf. *P. Oxy.* 1253, *P. Thead.* 16. PREISIGKE, *P. Cairo*, 18, 19, 33. *P. Lond.* 408 and 971 (= MITTEIS, *Chrest.* 95), *P. Amh.* 140.

(2) Documents where the title clearly refers to the *praepositus castrorum* as in the archives of Abinnaeus, who also holds the office of *praefectus alae* (*P. Lond.*, vol. 2 and *P. Gen.* passim; *P. Oxy.* 1101, which is an edict forbidding civilians to have recourse to the military official: [τῶ γὰρ π]ραιποσίτω μὲν [[τῶν]] στρατιωτῶν ἄρχην ἔξεσται, [ἰδιωτῶν] δε οὐκέτι).

(3) Documents where the *praepositus* performs police duties. Here the *praepositus castrorum* is probably meant since we know that he exercised such functions (*P. Gen.* 47, and possibly *P. Thead.* 13 and 52. Cf. GELZER, *op. cit.*, 59; WILKINSON, *Grundzüge*, 407, 415), while we have no definite evidence that the village official did (PREISIGKE, *P. Cairo* 6; *P. Oxy.* 1506). The judicial functions of the two offices certainly overlapped—legitimately or by usurpation (*P. Oxy.* 1101. *P. Lond.* 408)—and it is possible that the same may be true of the police authority. A Theadelphia appeals to both (*P. Thead.* 22 and 23). Unfortunately these two documents are fragmentary and their interpretation, therefore, is not definitely certain. But they admit the possibility that the duties of two officials were distinguished as judge and police agent respectively. To the *praepositus pagi* the appeal reads as follows: ἀξίω ὅπως κτλ. ἀναγκάσης [. . . .] το χρέως ἀποκατασταθῆναι τοῖς [.]

λόγοις εἶνα δυνηθῶ τὰ πρ[.]α (sc. πρόβατα) ἀπολαβεῖ. To the *praepositus castrorum* the appeal is: ἀξιῶ κτλ. ὅπως τοῦτον συλλαβόμενος καταναγκάσης αὐτὸν ἀποκαταστήσαί μοι τὰ κακῶς καθηρηπασθέντα. Apparently the former is requested to pronounce judgement (λόγοις!) and there is no evidence that he exercised police duties. The military official, however, is asked to arrest the defendant and to execute judgement, but it is impossible to say whether he had the power to give the judicial decision or not. In *P. Thead.* 21 a legal trial is implied and the *praepositus pagi* is requested to summon (μετακαλέσασθαι) the offender to judgement. Cf. *P. Amh.* 141 which GELZER (*op. cit.*, 57) calls a case of "Rechtsschutz."

(4) Finally there is a group of documents (*e.g.*, our lease) of which the content gives no clue to the duties of the *praepositus* or to his fuller title. In all these cases we are inclined to believe that the *praepositus castrorum* is meant, in view of the fact that his position was doubtless older, more powerful and more important. At any rate the *ex-praepositis* are doubtless military rather than civilian (cf. *Cod. J.* 10. 48, 2). A law, already ancient in the time of Valentinian, provided that those who nominated civilians to the office of *praepositus pagi*, if the candidate proved incompetent, should themselves be liable for the obligations involved in the proper discharge of the liturgy (*Cod. J.* 10. 72, 2).

9. For a similar dating by regnal years, cf. *P. Oxy.* 1041, 16. The problem of the arrangement of the indiction in the years 380-383 is somewhat complicated. From *P. Gen.* 68 we learn that the eleventh year of this cycle began as early as Pachon (before May 8, A.D. 382). Usually the indiction began in Pauni, but examples of its beginning in the earlier month may be found in *P. Lond.* 1083, 3 note and 1692, 4 note. In *P. Oxy.* 1041 (dated Pauni 15, A.D. 381) the payment of a loan is set for Mesore 1 (July 25, A.D. 381) of the *ninth* indiction (τῆς παρούσης ἐνάτης [ἰνδικτίωνος]). If the scribe did not make a blunder in the number of the indiction, it is evident that he knew at the time of drafting the document that the new indiction would not begin until after the first of Mesore. Similar examples of indictions beginning in Mesore are found in late Byzantine documents (*P. Oxy.* 1954: Mesore 16th, 5th indiction, beginning of 6th; *P. Grenf.* Series 2, 100: Mesore 2nd, 11th indiction). When, however, we turn to *P. Lips.* 21 which is dated by the consuls in A.D. 382, the lease is said to begin in the *ninth* indiction (ἀπὸ τῶν καρπῶν τῆς εὐτυχοῦς θ' ἰνδικτίωνος). Although it is possible to assume that the scribe made a mistake, it is much more likely that we are here dealing with a retroactive lease where the lessees had entered in possession after the harvest of the previous year and had done all the necessary work in connexion with the leasehold but had neglected to make the formal written contract until the new harvest was ready (cf. WASZYNSKI, *Die Bodenpacht*, 65; BERGER, *loc. cit.*, 378).

The indictions from A.D. 380-383 must have fallen somewhat as follows:

9th indiction	Pauni (?) 380- <i>ca.</i>	Mesore 15, 381 (<i>P. Oxy.</i> 1041).
10th	„	<i>ca.</i> Mesore 15, 381- <i>ca.</i> Pachon 12, 382 (<i>P. Gen.</i> 68) ¹ .
11th	„	<i>ca.</i> Pachon 12, 382-Pauni (?), 383.

The period of the tenth indiction is unusually short and we know of no other similar example. The irregularity may be due to a mistake of the scribe, abnormal agricultural conditions (if the indiction depends upon the harvest, we might assume that a late harvest was followed by an early one), or possibly to some political disturbance or reorganization (cf. GELZER, *op. cit.*, 7 ff.). There is little likelihood that money loans were made according

¹ The editor of *P. Gen.* 70 dated the document in the tenth indiction, probably in A.D. 381. Professor Victor Martin has kindly examined the document at our request and he states that the indiction year should be given as β' rather than ι'. This document, therefore, does not fall within the years 380-383.

to the Byzantine indiction (*P. Oxy.* 1041) or that this indiction was current in Egypt at this early date (*P. Grenf.* Series 2, 86, 5 note).

11. *Δρόμον Θοήριδος*. Cf. RINK, *op. cit.*, 29 ff.

14. This rental is absurdly small when compared with the 2500 silver talents paid for an upper room at Hermoupolis a few years earlier (*P. Lips.* 17, A.D. 377), or with the twelve million denarii paid for two rooms at Oxyrhynchus in A.D. 449 (*P. Oxy.* 1129). Cf. the rental cited in 4 above.

17. This example of lease on indefinite tenure is considerably earlier than those cited by BERGER, *op. cit.*, 370 ff. WASZYNSKI (*Bodenpacht*, 92 ff.) believes that "tenancy at will" in land leases marks the beginning of serfdom. However, the early appearance of such tenancies in the leasing of houses seems to imply that indefinite tenure had no such implication. We doubt if the tenant was bound to vacate without notice or to continue the lease at the landlord's pleasure (cf. BERGER, *op. cit.*, 372).

NOTE ON AN ANCIENT EGYPTIAN FIGURE

BY WARREN R. DAWSON

With Pl. xv.

As one of the illustrations of my article "Making a Mummy" (*Journal*, XIII, 40 ff.) I reproduced a photograph of the figure of a man inside a jar (Pl. xvi, *b*) and suggested that this might represent a mummy in course of treatment in the embalmer's salt-bath. Whether this suggestion be correct or not, the figure is of a rare and interesting type. Mr. Leo J. Rabbette of Boston, Mass., has since been good enough to send me photographs of a similar figure in his possession and has enhanced the favour by permitting me to publish them. (Pl. xv.) A comparison of these photographs with that of the figure I previously published reveals certain differences in detail, particularly in the position of the hands, but the two specimens are clearly of the same type. Nothing is known of the history of Mr. Rabbette's specimen, which was obtained from a dealer in Cairo.

Mr. Rabbette submitted his figure to Mr. Dows Dunham, Assistant Curator of the Egyptian Department of the Boston Museum of Fine Arts, who gave the following specification of the object:

"*Material.* Both jar and figure of common red brown ware, slightly straw marked, hand made, with traces of burnished red wash.

"*Figure.* Crude human figure in extreme contracted position, hands spread over face, knees and elbows in contact, ankles touching base of torso. Feet broken off and missing. Base of figure and legs roughly dressed with a stick or knife and flat on bottom. No indication of embalmer's incision—a slight irregular depression on left hip, just above the hip-joint and below the top of the pelvic bone, appears to me to be accidental. The oral cavities deeply indicated, apparently by pressure and rotation of a pointed stick before baking. The figure is partially coated with a thin muddy film. In parts, and above the level of the top of the jar only, distinct traces of burnished red wash, especially on arms, knees, back and shoulders. (None on head or hands.)

"Height over all, 30·5 cm.; base to top of knees, 15·0 cm.; top of head to tip of chin, 9·7 (vertically): front to back at shoulders, 10·0, at base, 11·0; width at shoulders, 6·5, at base, 6·7, at temples 6·0.

"*Jar.* Same material as figure: traces of red wash and burnish. Irregular, roughly flat base outside, rounded inside. Rim very irregular and slightly thickened, with shallow external groove for cover binding. Height, 18·2 cm.; diameter of rim, 19·6 and 18·7. mean 19·1; diameter of base, *ca.* 7·4; internal height, 15·4; thickness of rim, *ca.* 1·5. When in position in jar, the top of the figure rises 18·4 cm. above rim of jar."

It has been suggested to me that this figure may represent a contracted burial in a pottery coffin, which at first sight seems not improbable; on the other hand, the flattened base both of the figure and of the jar seems to show that its proper position is vertical and not horizontal. So far as I am aware, no contracted burials with a

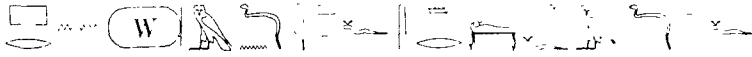


Pottery figure of a crouching man in a jar, in the possession of
Mr. L. J. Rabbette of Boston, Mass.

Scale 4.

vertical axis either with or without pottery coffins have ever been discovered in Egypt. However this may be, the object seems to me to be of sufficient rarity and interest to be worth putting on record, especially as we have the advantage of Mr. Dunham's examination.

P.S. There is an interesting passage in the Pyramid Texts which seems to refer to embalming in a jar. I overlooked this when writing my original article, and it will be convenient to insert it here. The phrase, which reads as follows, occurs twice in § 137.



“Unis has come forth from his jar after having rested in his jar.”

DAVID GEORGE HOGARTH

DIED NOV. 6, 1927

The death of Dr. Hogarth has removed not only a great archaeologist but one who always took a very special interest in the Egypt Exploration Society. His own active participation in its field-work was short: he helped Naville at Dêr el-Bahrî in the early nineties, he looked for papyri in the Fayyûm in 1895-6 with Grenfell, and that was all. His work at Naukratis, which went over the ground of Petrie's old campaigns for the Egypt Exploration Fund, was not carried out for the Fund, and his exploration of the cliff-tombs near Asyût was done for the British Museum. But he had been for twenty years an active member of the Committee, where his contribution to the work of the executive was always weighty and wise, and as Ashmole's Keeper consideration of the interests of his museum made him a regular member of the Distribution Committees. Here his contribution to the discussion was characteristic. At first he would be completely disinterested: really he did not much care what he took; anyhow he would not put the Ashmolean forward. Let others speak. But in the end one usually found that Hogarth had got the things he really wanted. He was a diplomat as well as an archaeologist! Hogarth's interest in the Society was almost as great as his interest in the Royal Geographical, which is saying a good deal. He never grudged work or trouble on our behalf.

Egypt did not, of course, interest him as did his first love, Anatolia, and later North Syria. In Mesopotamia proper, or Assyria and Babylonia, he may be said to have taken practically no interest, but directly one crossed the Khabur or traversed the defiles of the Tigris above Jezîret Ibn-'Umar his archaeological territory was entered. The connexions between Mesopotamia and Syria and the Hittite lands are, however, so close that there is no doubt that Hogarth's Hittite work would have benefited from closer acquaintance with Assyrian and Babylonian matters. But every student has to draw the line somewhere, and Hogarth already covered a territory large enough for most men! His historical and archaeological work, by which he is and will remain best known abroad and to his fellow-workers here, was perhaps most evident in the Anatolian and North-Syrian sphere. His excavation for the British Museum at Ephesus, in continuation of our old work there under Wood in the fifties, was an excellent example of archaeological method, and the reward, in the priceless relics of early Ionian art at Constantinople, was rich. Then came his digging of Carchemish, with C. L. Woolley, T. E. Lawrence, and R. C. Thompson as his assistants, which was carried on after he left by Woolley and has been published by them both. Of this work many interesting trophies may be seen in the British Museum, which administered the funds provided by a wealthy sympathizer for the excavation.

Hogarth's publication of the famous Ashmolean collection of Hittite seals, which he largely got together himself, was a labour of love to him. That brilliant and suggestive book *Ionia and the East* will always be a source of inspiration to labourers in a most fascinating field. It was a pity in some ways that Hogarth did not work more in the Alexandrian field. He knew far more than most other English scholars of ancient

Alexandria, and was always interested in the age of "Philip and Alexander of Macedon": but he had neither time nor opportunity for this work.

In less purely historical and archaeological circles in this country Hogarth is no doubt known best as a geographer, especially of Arabia, on which mysterious land and its inhabitants he had written semi-popularly since the publication of his *Nearer East*, with the result that he became one of the chief authorities on the subject, with further consequences in the work of the Arab Bureau at Cairo during the war, and in the Presidency of the Royal Geographical Society, which fell to him the last year of his life, and gave him a very great deal to do.

Hogarth never spared work. In spite of an insouciant manner, an amusing air of detachment from "professional" archaeology (and a very English understatement of his own contributions to it) he worked very hard indeed. And he worked to the end. He may, as he said, have become an archaeologist by accident, and he may have been intended by nature rather for a diplomat or an administrator of cultivated—nay learned—tastes, but after all he devoted his life very largely to archaeology and to our knowledge of the ancient world, and to the furtherance of archaeological interests both in his University and outside. His apparent economy of enthusiasm veiled an interest as keen as anybody's, and more disciplined than that of most. And though some suspected this aloofness and the shrug and half-cynical smile with which he would often refer to his own work as in reality marking a "superiority complex" second to none, I always thought that his modesty at any rate was as genuine as it was undeserved. He is perhaps appreciated best by members of his own University. His way of thinking and of writing were typically of Oxford. A generalizer; he wanted the wood and cared nothing for the trees. A swift seizer of salient characteristics, a comparer and a brilliant summer-up. A master of allusion and of comprehension of much in a phrase.

Striking phrases were characteristic of his style. Often proving himself a master of the *mot juste*, at other times he was a little difficult for the uninitiated to follow. He used odd words sometimes; he liked for instance to talk of ancient states and peoples as "societies"; such a phrase as "a Hittite society in Anatolia" may have puzzled more than one reader not nurtured in the groves of Academe. A touch of preciousness here and there. But it is difficult to ring the changes on the English language, fertile though it be in expedients, in descriptive work of the archaeological and especially the geographical kind, and still be distinct in style and, above all, readable. Hogarth always was both, and much of the success of his *Nearer East* was due to this characteristic style of his, which could condense illuminating information into few words. Some dubbed him a "journalist" on this account. That is then to say that nearly every Oxford man is a bit of a journalist, or has the *flair* for superior journalism. No doubt he has: why not? And Hogarth when on occasion he did act as an actual journalist was an extremely good one. He had a sense of the press, and an unflinching power of description. Of his two travel-books in lighter vein we need not speak: there are chapters in them that are almost classical, such as the description of the flood at Zakro in Crete (in *Accidents of an Antiquary's Life*) and of the ride in the storm down the Calycadnus Valley (in *A Wandering Scholar in the Levant*). Others, such as that of the serpent-slayers of the Delta (*Accidents*, etc.) are delightful, even rollicking, in their humour. Hogarth always saw the humour of a situation, though somewhat grimly at times. Characteristic was the tale he would tell of his early book *Devia Cypria*, the story of his wanderings in Cyprus, that he believed it was now only to be found in the boxes devoted by cheap booksellers to literature of a very doubtful nature.

Of his Egyptian work and experiences he wrote little. His digging at Asyût in 1907 never satisfied him, and he never published its results, although it yielded some very interesting early Middle Kingdom coffins to the national collection. All we hear of it is in a single chapter in *Accidents of an Antiquary's Life*. His two seasons' work at Naukratis was published with C. C. Edgar in the *Annual of the British School at Athens*, v (1898), 26 ff., and in the *Journal of Hellenic Studies*, xxv (1905), 105 ff. He added a good deal of interest and importance to Petrie's discoveries. His papyrus-hunting work, with B. P. Grenfell, for the Fund in the Fayyûm was published in *Fayum Towns and their Papyri* (1900). At Dêr el-Bahri he did nothing that he considered worth talking about, being there merely as assistant to Naville to gain experience in excavation, and having then no Egyptological knowledge. Hogarth never had the time or probably the inclination to study the hieroglyphs, but he was a very accurate and knowledgeable critic of Egyptian art, which he knew as well as most men, and in which he was always keenly interested.

Many younger men, not least among them the writer of this, have experienced real kindness, much more than mere courtesy, at his hands, and will always remember with pleasure the figure with the slight *nuance* of the country gentleman in its attire, the manner at first abrupt, then with a broadening smile on the face presaging some ironical remark in the unusual and unforgettable resonant yet (except on public occasions) not loud voice, the short phrased, curt sentences in speaking, and the handwriting, neat and scholarly yet swiftly flowing, with the characteristic signature. All will regret his untimely death.

H. R. HALL.

BIBLIOGRAPHY: GRAECO-ROMAN EGYPT

A. PAPYRI (1926—1927)

[Even after obtaining assistance in the preparation of this bibliography (see *Journal*, XIII, 54, note 1) found it so exhausting a task that I reluctantly decided to abandon it. As, however, no single person could be found to continue the work it was eventually arranged to make its production a joint undertaking. The scholars who have assisted this year, and who will, I hope, continue their collaboration in the future, are:—Mr. H. J. M. MILNE, Mr. A. D. NOCK, Mr. J. G. MILNE, Mr. N. H. BAYNES, Prof. F. DE ZULIETA, Miss M. E. DICKER, Mr. R. MCKENZIE. The plan adopted has been to divide the reading of the periodicals used among the contributors, each reader communicating references which fall outside his own sphere to the proper person. Each collaborator is responsible for the compilation and arrangement of his own section (at the end of which his name will be found), though I have made a few editorial changes to secure greater uniformity of form and have added a few references not accessible to the author of the sections in which they occur. H.I.B.]

1. LITERARY TEXTS.

Collections. Several important collections have appeared in the course of the year, easily headed by the new volume (xvii) of the *Oxyrhynchus Papyri*, the literary section of which contains important fragments of the *Aitia* of Callimachus, Hesiod's *Catalogue*, Sappho Bk. ii. (already published by LOBLI), Sophocles—*Nauplius?*, Euripides!—*Parithous*, Phlegon—*Chronica?*, Life of Aesop, Encomium on the Fig, Scholia on Euphorion?, Treatise on Rhetoric, Glossary, Latin fragment on Servius Tullius, Latin Juristic fragment. Also additional fragments of *Icheuntae*, *Euryppylus*, Sappho, Alcaeus, Bacchylides, Ibycus. Among known works are: Hesiod—*Theogony* and *Opera*, Pindar—*Ol.* ii, Sophocles—*Ajax*, Lycophron—*Alexandra*, Herodotus—Bks. i, vii, viii, Thucydides—Bks. iv, v, viii, *Cyropedia?*, Plato's *Phaedrus*, Gaius—*Institutiones* iv. For the non-literary texts in this volume see § 3.

Another batch of fragments from Oxyrhynchus, published by EDGAR in *Annales du Service des Antiquités de l'Égypte*, xxvi, 203–210, includes: Homer, Callimachus—*Hymn to Artemis* with scholia, glossary, hexameters, Hesiod—*Theogony*, Hesiodic Genealogy of Heracles, Xenophon—*Mem.* iii, History of Alexander, Oppian—*Halieutica*.

The new P.S.I. VIII contains fragments of *Iliad* and *Odyssey*, Romance with names of Καλλιγόνη and Εὐζόριος, Prophecy on *τάλαινα Αἴγυπτος*, Multiplication tables, Lexicon, Ostrakon with hexameters mentioning Pleuron and Calydon.

PAUL COLLART publishes in *Les papyrus Bouriant*, Paris, 1926, an important treatise on Aeolic forms. Other pieces include: Historical fragment mentioning Ptolemy, more *Acta Abundantia*, *Iliad* XIII, and a schoolboy's exercise-book first published in 1906 in Wessely's *Studien*.

Finally we may mention a convenient compilation—*Cat. of the Literary Papyri in the British Museum*, 1927, by H. J. M. MILNE with many suggestions by CRONERT, HUNT and BELL. Magic (except amulets) and metrology are excluded. Most of the pieces are known already and of these as a rule only a description with pertinent bibliography is given (although some of the *Petro Papyri* are re-edited). The new items include: two important Alexandrian dramatic lyrics, poems of Dioscorus of Aphroditopolis, an *Iphigonia*, scholia on the *Aitia*, epigrams of Parthenus, early metrical colophon (publ. in *Cl. Rev.*, xli, 60), scraps assigned to Semonides of Amorgos and Archilochus, grammars assigned to Phrynichus and Latin to Palaemon, a long *τόποι δικαστικοί*, a non-vulgate *Iliad* XII, an Invocation to the Nile, medical receipts, biblical texts, theology, etc. At p. 126 observe that No. 153 = P. Herc. 1149 and erase "with—it." At p. 127 No. 154 = P. Herc. 1042 and erase "The remainder—Naples."

E. CAVAIGNAC gives statistics of authors found and chances of attribution in *Sur l'attribution des fragments de papyrus (Rev. de l'Ég. anc., i, 1925–27, 176–81)*.

KORTE'S *Hellenistische Dichtung*, 1925, is reviewed by J. GLEUCKEN in *Gnomon*, 1927, 692–6, by R. PFEIFFER in *Phil. Woch.*, 1926, 961–6, and by J. HAMMER in *Class. Phil.*, 1927, 115–18.

POWELL'S *Coll. Alexandrina* is reviewed by P. MAAS in *Gnomon*, 1927, 689-92, and by E. CAHEN in *Rev. ét. anc.*, 1926, 185-7.

Epic. In *Class. Philology*, XXII, 99-100, OLDFATHER confirms a reading of Zenodotus and Aristophanes in *Od. I*, 38 from Pap. 121 in the Brit. Mus. and Epictetus, III, i, 38 in Cod. Vind. 307—'Ερμείαν πέμψαντε διάκτρονον. GUÉRAUD'S *Odyssey* papyrus is reviewed by HOMBERT in *Rev. Belge Phil. Hist.*, v (1926), 215-16.

HENRI HENNE prints in *Bull. Institut. Franç. d'Arch. orient.*, XXVII (1927), 79-82, II, III, 1-5, from an ostrakon. New reading in l. 5 *ροῆσιν*, vulgate *ροάων*.

In *Riv. di Filologia*, 1926, 572 f., A. R. reviews WINTER'S edition of 'Αλκιδάμαντος περὶ 'Ομήρου (see *Journal*, XIII, 85).

An epic fragment (1-2 cent. A.D.) with parts of 21 lines, mentioning Egypt and the Nile, is edited by S. EITREM in *Symbolae Osloenses*, v (1927).

Lyric. LOBEL has now followed up his edition of Sappho with a companion volume, ΑΛΚΑΙΟΥ ΜΕΛΗ, Oxford, 1927, in which he subjects the usage of Alcaeus to those rigorous tests which have so dismayed the critics of his Sappho. Reviewed in the *Times Lit. Suppl.*, 12 Jan. 1928, and by J. M. EDMONDS in *Comb. Rev.*, 27 Jan. 1928. J. SITZLER reviews the Sappho in *Phil. Woch.*, 1927, 993-1004, and makes many suggestions. F. STIEBITZ proposes restorations of Sappho 65 (Diehl) in *Phil. Woch.*, 1926, 1259-62.

MEDEA NORSA publishes *Frammenti di un inno di Philiskos*, 32 choriambis (right half preserved) of a hymn to Demeter (3 cent. B.C.) in *Stud. Ital. di Fil. Class.*, 1927, 87-92. Cf. P. MAAS in *Neues zu Philiskos von Kerkyra* in *Gnomon*, III, 439-40.

VOL. III of EDMONDS' *Lyra Graeca* has now appeared, containing Bacchylides, Timotheus, etc.

I learn from *Aegyptus* of two fragments of hymns to Isis published by G. OLIVERIO in *Not. Arch. Colonie*, IV (1927), 207-12. Bacchylides III is translated by G. CAMELLI in *Atene e Roma*, 1926, 204-7, and in the same volume, 286-8, N. RUSSO interprets and translates the Alexandrian Erotic Fragment (P. Grenf. I, 1)—*La Fanciulla Abbandonata*.

Elegiac. The Berlin *Tyrtaeus*, text and translation, is re-edited by V. DE FALCO in *Riv. Indo-Grec.-Ital.*, x (1926), 63-76.

EDGAR publishes in *Ann. du Service*, XXVII, 31-2, a Greek epitaph of 16 lines from Saqqarah of the Roman period in dialogue form on one Heras.

Drama. VOGLIANO re-edits a tragic fragment first published by VITELLI in *Rev. égyptologique*, I (1919 — *Il frammento tragico fiorentino* in *Riv. di Fil.*, 1926, 206-17.

WILAMOWITZ gives restorations and suggests the *Phrixus* of Sophocles in *Riv. di Fil.*, 1927, 79. Attributed in *Hermes*, 1928, 1-14, by W. SCHADEWALDT in a more elaborate discussion to the *Phrixus* of Euripides.

The sources of the *Ichneutes* are discussed by L. PREVIALE in *Boll. di Fil. Classica*, XXXIII (1927), 174-82. He finds other origins besides the *Hymn to Hermes*. I learn from *Aegyptus* of an article by F. AGENO, *Indicazioni di senso negli Ichneutai di Sofocle*, in *Raccolta Ramorino* (Milano, 1927, 627-59). The *Eurypylus* is studied by G. BRIZI in *Aegyptus*, 1927, 3-39. The *Hypsipyle* is shown to be a late play by the resolved 5th foot in col. iv, 35 of P. Oxy., by A. KORTE in *Phil. Woch.*, 1927, 584, in a review of TH. ZIELINSKI'S *Trigodumenon libri III*.

Bursians Jahresbericht, LII (1926), reports on the recent (1921-25) literature on comedy. The new discoveries are allotted a section. Important studies on *Menander* appear in *Rh. Mus.*, LXXVI (1927), 1-13, by CH. JENSEN—*Der Anfang des 4 Aktes der Epitrepontes*. He places leaf Z as first of the quaternio and admits the Didot *ῥῆσις* as the speech of Pamphile.

MARCEL HOMBERT translates the Περικειρομένη as *La femme aux cheveux coupés* in *Rev. Belge de Philologie et d'Histoire*, VI (1927), 1-30. The same play, ll. 147-51, is interpreted in *Hermes*, 1927, by WILAMOWITZ—*Lesefruchte*, CCXXVII.

The *Georgos*, l. 34 (καλόν γ' ἂν εἴη) is translated "a fine thing it would be" (ironically), and in *Samia*, 322-3, *πιθανόν* is treated as neuter—by O. GUÉRAUD in *Bull. Institut. Franç. d'Arch. orientale*, XXVII (1927), 111-12.

CAPOVILLA'S *Menander* is reviewed by O. REGENBOGEN in *Or. Lit.-Z.*, XXX (1927), 854-6. Contents not deemed adequate to scope. VOGLIANO reviews WILAMOWITZ—*Schiedsgericht* in *Boll. Fil. Class.*, 1926, 144-53, and COPPOLA in *Riv. di Fil.*, 1927, 394-402. I learn from the *Cl. Rev.* of a new edition of *M.* by W. G. WADDELL—*Selections from Menander*. Pp. xxxvi+182; illustrations. Oxford: Clar. Press, 1927. 7 6 net. A 2-3 cent. papyrus from the Fayyûm with the subscription *Μενάνδρου γνῶμαι* is edited by K. KALBFLEISCH from the Janda collection in *Hermes*, 1928, 100-3. Six of the 10 lines are new. Neither

the *Loeb* nor the *Budé* Herodas has appeared as yet. HERZOG's edition is reviewed by KNOX rather favourably in the *Journal*, XIII (1927), 131-2, and SITZLER reviews H.'s *Traum des Herodas* (*Philologus*, LXXIX, 370-433) with various proposals in *Phil. Wochenschr.*, XLVII (1927), 35-40.

VOGLIANO re-asserts in *Ancora l'VIII mimianto di Heroda* that a woman is the speaker. Thinks a column may be missing and doubts if the present end really belongs to this mime. Would scrap ll. 30, 31, θεῶν ἀδελφῶν τέμενος, etc., in Mime I—*Riv. di Fil.*, 1927, 71-8.

In *Mnemosyne*, 1927, 104-8, VOLLGRAFF discusses the meaning of πύραστρον in *Herodas*, IV, 62.

Grammar. *Byz. Ztschr.*, 1927, 181, reviews a publication: WILLI GOBER, *Ein spätantiker Papyriut-kodex des Dionysios Thrac.*, P. Hal., 55 a. *Mittelalterliche Handschriften, Festsgabe zum 60. Geburtstag von Hermann Degering*. Leipzig, Hiersemann, 1926. S. 111-18 + 1 Taf.; Codex of 5-6 cent.

History. Various historical papyri are re-edited by JACOBY in his *Fragm. Graec. Historiker*. P. Herc. 1418 is restored by VOGLIANO in *Nuovi Testi Storici* and BELOCH adds a supplementary note on *Mithras*. *Riv. di Fil.*, 1927, 310-31.

The papyrus on the archaeology of Thucydides is reviewed by ROSSBACH in *Phil. Woch.*, 1926, 513, and by K. FR. W. SCHMIDT in *Gnomon*, III (1927), 61.

The Olympian Chronicle (of Phlegon?) = P. Oxy. II, 222, is republished by W. JANELL in *Klio*, XXI (1927), 244-9.

In *Class. Phil.*, 1926, 346-55, W. G. HARDY writes on *The Hellenica Oxygynchonit and the Decastation of Attica*.

Medicine. NACHMANSON'S *Neuplatonischer Galenkommentar* (see *Journal*, XIII, 87) is reviewed by R. FUCHS in *Phil. Woch.*, 1927, 545-8.

E. PEZOPOULOS makes several restorations in παρατηρήσεις εἰς παπύρους Ἑλλήνων ἰατροῦς καὶ Βυζαντιακῶς συγγραφεῖς (*Byz. Neogr. Jhb.*, v, 1926, 63-75).

Metrics. An important article, *Scluppo musicale dei metri greci*, by CARLO DEL GRANDE in *Riv. Indo-Grec.-Ital.*, 1927, 1-144, uses the evidence of P. Oxy. 9, 220, etc.

Music. TH. REINACH'S *La Musique grecque*, 1926, is reviewed by A. PUECH in *J. des Savants*, 1927, 88-9, and by C. DEL GRANDE in *Riv. Indo-Grec.-Ital.*, 1926, 282-3.

The hymn with music (P. Oxy. 1786) is treated by O. URSPRUNG—*Der Hymnus aus Oxygynchonit im Rahmen unserer kirchen-musikalischen Frühzeit* in *Theologie u. Glaube*, XVIII (1926), 397-419; and by H. ALBERT—*Das älteste Denkmal der christlichen Kirchenmusik in Die Antike*, II (1926), 282-90. These references I owe to *Byzant. Ztschr.*

Orators. In the *Budé Aeschines*, tome I, by V. MARTIN and G. DE BUDÉ, 1927, the authority of the papyrus texts is examined.

L. AMUNDSEN discusses an Oslo papyrus fragment of Demosthenes, *De Corona*—summarized in *Phil. Woch.*, 1927, 820-1. It agrees mostly with S.

Interesting fragments from a collection of progymnasmata are published from a 3-4 cent. Vienna papyrus by H. GERSTINGER in *Mitteilungen des Vereines klass. Philologen in Wien*, IV (1927), 35-47.

Philosophy. In a very important article, *The Herbar in Antiquity*, in *Journ. Hell. Stud.*, XLVII (1927), 1-52, C. SINGER edits, with plates, the Johnson papyrus and connects it with the pseudo-Apuleius tradition.

S. LURIA discusses P. Oxy. XV, 1797, in *L'Argomentazione di Antifonte* in *Riv. di Fil.*, 1927, 80-3, while WILAMOWITZ in *Lese-fruchte*, CCXXI (*Hermes*, 1927), seconds LURIA in his comparison of Antiphon and Euripides (see *Journal*, XIII, 87). The sophist Antiphon can be distinguished from the orator textually by the former always using the form ξυν and ττ for later συν and σσ—so LURIA in *Riv. di Fil.*, 1927, 218-22.

VOGLIANO writes on *Nuovi Testi Epicurei* (P. Herc. 1005) in *Riv. di Fil.*, 1926, 37-48. An important article by F. ZUCKER in *Philologus*, LXXXII, 241-67, suggests restorations of Philodemus—*Zur Textherstellung und Erklärung von Philodems v. Buch περὶ ποιημάτων. Mit einem Eckars über εἰρησιλογεῖν, εἰρησιλογία, εἰρησιλογος*.

In *Boll. Fil. Class.* VOGLIANO reviews DE FALCO'S article on the περὶ κολακείας of Philodemus (see *Journal*, XIII, 87). Reviewed also by D. BASSI in *Aegyptus*, VIII (1927), 198-9.

REGINA SCHACHTER has collected the fragments of Philodemus περὶ ποιημάτων, Book II, from *Folaminia Herculanensis*, tom. X, in the periodical *Eos = Commentarii Societatis Philologicae Polonoarum*, ed. R. GANSZYNIEC, TH. ZIELIŃSKI, Leopoli [=Lwow], XXIX (1926), 15-28.

Romanov. In *Phil. Woch.*, 1927, 1558, E. HOEMANN notices LUDVÍKOVSKÝ'S book on the Greek romance (see *Journal*, XIII, 87).

2. RELIGION, MAGIC, ASTROLOGY.

(Including Texts.)

General. Vol. LXXXII of *Revue des études juives* consists of *Mélanges* in honour of I. LEVI's seventieth birthday, and opens with a bibliography of his writings (we may note p. 23, on Alexander the Great in Jewish legend). Vol. VI of *Jahrbuch für Liturgiewissenschaft* includes as in previous years a valuable bibliography of liturgical material and has a careful criticism of LIETZMANN, *Messe und Herrenmahl*, by O. CASEL (209-17). The new edition of *Religion in Geschichte und Gegenwart* (Mohr: Tübingen, 1926-) includes a number of relevant articles, as for instance *Alchemie* by F. R. STRUNTZ, 194-200; excellent), *Alexandria, Alexandrinische Theologie, Allegorie, Alphabet, and Aegypten*, IV.

HOPFNER'S *Fontes* has been reviewed by K. PREISENDANZ in *Gnomon*, 1926, 478-81.

E. F. BRÜCK, *Totentil und Seelgerat*, has been reviewed by E. BICKEL in *Phil. Woch.*, 1927, 721-6 (qualified praise), A. D. NOCK in *Journ. Hell. Stud.*, XLVII (1927), 151-2, D. M. ROBINSON in *Am. Journ. Arch.*, XXXI (1927), 132-3, K. PREISENDANZ in *O.L.Z.*, XXX (1927), 235-7, HAAS in *Theol. Lit.-Z.*, 1926, 505-8.

E. FASCHER, ΠΡΟΦΗΤΗΣ (Topelmann: Giessen, 1927. 12 M.) discusses, pp. 76-101, the use of *προφήτης* to render "Egyptian priest." It has been reviewed by J. M. CREED in *Journ. Theol. Stud.*, XXIX, 57 f.

FR. BILABEL, in a review in *Phil. Woch.*, 1927, 836, promises a Corpus of papyrus texts important for religious history.

K. LATTE, *Die Religion der Römer und der Synkretismus der Kaiserzeit* (*Religionsgeschichtliches Lesebuch*, Heft 5; Mohr: Tübingen, 1927. 4 M. 30, or in subscription, 3 M. 90), gives an excellent collection of texts in translation.

Pre-Ptolemaic. I learn from a summary in *Rec. hist. rel.*, XLI (1925), 261-2, that the late H. BASSET in *Mélanges R. Basset* (Leroux: Paris, 1923), has published an elaborate study of the Libyan Ammon, regarding A. as a Libyan god, akin to Amen-Rê and assimilated to the great divinities of successive conquering peoples. Of Ammon there is a judicious discussion by E. S. G. ROBINSON, *B.M.C. Cyrenaica*, cccxxxiii-ix.

Ptolemaic: Texts. In W. KUNKEL'S *Verwaltungsakten aus spätptolemaischer Zeit* (*Arch. f. Pap.*, VIII) we may remark nos. 11-13 (pp. 207-11) recording the delivery of corn to the priests at Tilothis and also for the *ἀθήρα* or "porridge" daily set like shewbread before the Nemeseis and Adrasteiai, "very great divinities."

H. I. BELL'S suggestion (*Gnomon*, 1926, 569) that *ἀθήρα* was sold by the temple in *U.P.Z.*, 98, is very interesting in this connection; presumably the *ἀθήρα* was thought to have acquired special virtues by this *contagium* (BELL'S suggestion is approved by WILCKEN in *U.P.Z.*, I, 654).

In P. BOUVIANT (reviewed in § 3) we may here note no. 12, a letter dated 88 B.C. by Plato to the priests and others at Pathyris. COLLART in his commentary has some notes (p. 59) on the loyalty of the priest-hoods to the Ptolemaic dynasty.

U. WILCKEN, *Zu den "Syrischen Göttern"* (*Festgabe für Adolf Deissmann*, 1-19; Mohr: Tübingen, 1927; obtainable separately), first discusses the existing evidence for their cult in Egypt, explaining *ἑστυγμένος* in P. Paris, 10 (*U.P.Z.*, I, no. 121) with reference to Lucian *de deo Syria*, 59, and comparing τὰ στίγματα τοῦ Ἰησοῦ in *Gal.* 6. 17, and then publishes P. Freib. 76. 7, early 2nd cent. B.C., a complaint about a nocturnal attack on an Ἀραργαρίων in Philadelphia with most instructive comments.

General. E. R. BEVAN, *A History of Egypt under the Ptolemaic Dynasty* (noticed in § 4), gives, pp. 87-90, a good general sketch of religious conditions, 106-8 of the royal cult at Ptolemais, 127-31 of deification, 177-8 of the relations of the government and the native priest-hoods, 296-9 of the Serapeum papyri in *U.P.Z.*

L. R. TAYLOR, *The "Proskynesis" and the Hellenistic Ruler Cult* (*J.H.S.*, XLVII, 1927, 53-62; cf. § 4), comments, p. 57²⁴, on the Ptolemaic oath by the king's *daimon*. In the *Cult of Alexander at Alexandria* (*Class. Phil.*, XXII, 1927, 162-9), she gives evidence for the identification of Alexander with Agathos Daimon.

R. HERZOG has some remarks on Ptolemaic cult in the course of a paper on Herodas in *Philologus*, LXXXII: he holds that ΘΕΩΝΑΔΕΛΦΩΝ on the coins from 270 onwards refers to the two pairs, Ptolemy I and Berenice on the one hand, and Ptolemy II and Arsinoe Philadelphos on the other; the title Soter, originally applied to Ptolemy I in his lifetime in cultus outside Egypt and in private cultus in Egypt, became canonical and produced the fixed epithet Σωτήρης, whence θεοὶ ἀδελφοί was limited to Ptolemy II and Arsinoe (pp. 53-8).

H. JEANMAIRE, *La politique religieuse d'Antoine et de Cléopâtre* (*Rev. arch.*, XIX, 1924, 241-61), shows how Antony and Cleopatra used religious propaganda. This able and illuminating paper is completed by H. J. ROSE, *The Departure of Dionysos* (*Ann. Arch. Anthr.*, XI, 25-30), who has discovered counter-propaganda by Octavian in two stories preserved in Plutarch's *Life of Antony*.

R. REITZENSTEIN, *Die hellenistischen Mysterienkulte*, has appeared in a third edition, much revised and amplified (Teubner, 1927; pp. viii+438, with 2 plates. 14 M. unbound; 16 M. bound). The new edition is indispensable, even to those who possess the first or second. I would add here to my review in *Gnomon*, 1927, 643-6, only the remark that REITZENSTEIN'S view that ὄρατικοὶ ἄνδρες in Philo corresponds to γνωστικοὶ ἄνδρες may be strengthened by a reference to a gloss in Hesychius, III, 215, l. 1194, Schmidt ὄρατικῶν· γνωστικῶν. This admirable book has been warmly praised by H. J. ROSE in *Class. Rev.*, XLII (1927), 234, and *J.H.S.*, XLVII (1927), 272. REITZENSTEIN'S support (p. 210, of the supplement ὁ Ἄμ[μωρ] ἦκει ἐπ' ἐμέ in *U.P.Z.*, LXXVIII, 44, is opposed by WILCKEN, *Urkunden*, I, 653-4. A very interesting appreciation has now appeared by von HARNACK, *Theol. Lit.-Z.*, 1927, 364-5.

A. M. WOODWARD, in his report on archaeological finds, notes *J.H.S.*, XLVI, 1926, 249. SALAC'S discovery that on the Acropolis at Cyme the earlier cult of some goddess of fertility was replaced in the 2nd century B.C. by the worship of Isis and Osiris.

E. HOPPE, *Heron von Alexandria* (*Hermes*, LXII, 69-105), dating Heron in the second half of the second century B.C., deserves a mention here in view of Heron's penny-in-the-slot machine for holy water and of his other pious inventions (for which cf. *Pauly-Wissowa*, VIII, 996 and 1048).

W. VON BISSING, *Eine hellenistische Bronzefigur des Gottes Bes* (*Ath. Mitth.*, I, 1925, 123-12), discusses a figure in the Naples Museum: it was meant to support a candelabrum.

Imperial. No. 17 of the Cornell papyri (reviewed in § 3), from Hibah, of the year 447 A.D., as restored by FR. BILABEL in *Phil. Woch.*, 1927, 1295, gives, ll. 38-9, an oath by Herakles as god of the nome, [καὶ τῶν τοῦ νο]μ(οῦ) θεῶν Ἡρακ[λέ]α [ἐξ ἐγού]σι; καὶ ἐπ' ἀληθείας atter that by the Emperor.

P. Bouriant, no. 41*a*, is a γραφὴ ἱερέων and records the purchase by two priests of places as στολισταί, and (col. iii) the purchase of a πετραφορία. COLLART has a note (p. 128, on Roman regulations in the matter.

E. ORTH, *Ein orphischer Papyrus* (*Phil. Woch.*, 1927, 1469-71), re-edits P. Berol. 13426 (100-150 A.D.; first published by SCHUBART, *Papyruskunde*, 42, in GERCKE-NORDEN, *Evolution*, I, ix, a mythological fragment on the death of Orpheus with some new conjectures of his and two from WILAMOWITZ. In l. 9 f. read perhaps ἀνθ' ὧν | [δὴ μνηστικ]ακος κ.τ.λ., not δὲ as ORTH.)

In P. Oxy. 1380, 104 ff. F. CUMONT, *Foilles de Douce-Europos*, 1927, 197₂, proposes ἐν Πέρσαις Ἀναεῖτω (for Λαεῖτῶν)...ἐν Σοῖσαις Ναυ'αίαν. *Ib.* 106-7.

U. WILCKEN, *Zu den "Syrischen Gottern."* 3₂, proposes ἐν Φωνικῇ or -ίχη Σνρ[ε]ια(ς) (= Σνρία) θεός.

W. SPIEGELBERG, *Der Weckruf an die ägyptischen Götter* (*Arch. f. Rel.*, XXIII, 348), remarks that Porphyry, *De abst.*, IV, 9, affords evidence for the continued practice in the 3rd century A.D. of greeting or awakening the deity of the temple in the morning.

R. MEHLIS, *Antoninus-Denkmanzen* (*Phil. Woch.*, 1926, 174-6), puts together coin-types relating to the apotheosis of Antinous.

A. D. NOCK, *Pagan baptisms in Tertullian* (*Journ. Theol. Stud.*, XXVIII, 289-90), defends the MSS. reading *Pelusiis* in *De bapt.* 5 and explains it as referring to the *Pelusia*, a festival celebrated on March 20 in Rome.

M. SCHEDE, *Isisprozession* (AFFEAOΣ, II, 60-1, with plate), publishes a Potsdam relief showing a procession very like that described by Apul. *Met.* XI, 10-11.

J. LEIPOLDT-K. REGLING, *Archäologisches zur Isisreligion* (*Ib.*, I, 126-30), with 5 plates, reproduce the Herculaneum pictures and six relevant coin-types with bibliography.

I. FRANK-KAMENETZKI, *Über die Wasser- und Baumkultur des Osiris* (*Arch. f. Rel.*, XXIV, 234-43), quotes Georgian and Caucasian folklore parallels for the myth as given by Plutarch: I feel this enquiry is vitiated by the writer's failure to recognise that the tale as it there appears has suffered Hellenistic development.

R. BARTOCCINI, *Isis*, in De Ruggiero, *Dizionario epigrafico di antichità romane*, IV, fasc. 3 (1926), 86-91, collects the Latin epigraphic evidence in convenient form. On her connection with the planet Sirius GUNDEL has written in *Pauly-Wissowa*, III A, 321-2. A dedication of an image of Diana ALBYLAE ISIDI has been found at Tivoli (*Notizie degli scavi*, 1926, 417).

E. GHISLANZONI, *Il Santuario delle Divinità Alessandrine* (*Notiziario Arch. Col.*, IV, 1927, 149-206), publishes a most important sanctuary from Cyrene. On the evidence of a coin find GHISLANZONI dates it

ca. 350 A.D., and he is inclined to connect it with the Julianic revival. The finds include two Hecataea, a seated Cybele, the torso of an Eros, a group of Charites, a head of Mithras (Pl. xx, 7), a statuette of a priestess of Isis, a statue of Zeus Sarapis, and a most interesting statue of Isis with the lower part of her body swathed like a mummy (not later than first century A.D.), an Aphrodite, and a Libyia with attributes of Isis. We have also a self predication by Isis in iambs, in an inscription dated 103 A.D., closely akin to the texts found at Ios and Andros, and fragments of a hymn in hexameters (published by G. OLIVERIO, *ib.*, 201-12).

The finds have been discussed by F. CUMONT, *Nouvelles découvertes à Cyrène (Journ. des Sav., 1927, 318-22)*. He makes the illuminating suggestion that the supposed Isis is not the goddess, but an initiate playing her part, and therefore wearing divine robes, and swathed as a mummy because initiation was a mystic death: he also shows that the statue illustrates the "rite of the veiled hand," as DIETERICH called it.

A. TARAMELLI in his report on Sardinian discoveries (*Notizie degli scavi, 1926, 446-56*) raises the question (p. 453) whether the crypt called Carcere di S. Efisio was used by worshippers of Isis who fled from Rome as a result of the repressive measures directed by Tiberius against their worship.

H. LEHNER, *Orientalische Mystriekulte im römischen Rheinland (Bonner Jahrbücher, CCXXIX, 1925, 36-91; obtainable separately)*, discusses, pp. 47-50, remains of Egyptian cults in his region; specially valuable is his treatment (pp. 56-8) of the influence of the Oriental cults here on the native cults. He does not rate the importance of the army high as a channel of Eastern beliefs. For a statuette of Harpocrates found in India cf. A. W. LAWRENCE in *J.H.S.*, XLVI (1926), 263.

R. REITZENSTEIN, *Weltuntergangsvorstellungen, 36 ff.* (= *Kyrkohistorisk Årsskrift, 1924, 164 f.*), explains P. Fay. II as a Hellenisation of an Oriental *Descensus ad inferos* myth and suggests col. iii 7 δ δὲ τὸν θηῶν εἰς κρᾶδιαν φέρον, 23 $\lambda\upsilon\gamma\rho\alpha$ σῶματα δ' [εἶρ]αθ' ὑπερθε γῆς, 42 $\kappa\alpha\tau\grave{\alpha}$ γῆς ἐβόα δὲ.

E. PETERSON, *Eἰς θεός als Zirkusakklation in Byzanz (Theol. Lit.-Z., 1927, 493-6)*, publishes some addenda to his valuable Εἰς θεός, noticed here last year (XIII, 89) and reviewed by K. PREISENDANZ, *O.L.Z.*, xxx (1927), 960-2.

H. LEISEGANG, *Der Bruder des Erlösers (ΑΓΓΕΛΟΣ, I, 24-33)*, studies a concept in the Hymn of the Soul in *Acta Thomae* and in *Pistis Sophia*, and traces it to speculation of a Philonic type. His index to the *editio maior* of Philo by COHN and WENDLAND deserves a mention here (pars I; Berlin, 1926; de Gruyter. Pp. viii+338. 30 M.). That it does not cover the fragments and is not exhaustive is the fault of the times and not of the author (commended by O. STÄHLIN in *Phil. Woch.*, 1927, 8-13, cf. 281-2).

B. A. VAN GRONINGEN, *Inscriptio dedicatoria Aegyptiaca (Mnemos., LV, 1927, 263-8)*, puts together three fragments of a dedication at Coptos of which part was published by PREISIGKE in *Sammelbuch, 5874*; it is interesting for its description of Sarapis as τὸν πολλὰ Δία Ἥλιον μέγαν | Σάραπ[ω τὸν φιλ]οκαίσαρα (discussed by GRONINGEN, p. 265) and for its reference to the *Olympia* kept at Alexandria.

T. GRASSI, *Le liste templari nell'Egitto greco-romano secondo i papiri (Studi della scuola papirologica, Vol. IV; Parte IV; Milano—"Aegyptus"—1926; pp. 72. 12 l. 50)*, is an excellent study of temple inventories.

J. VOGT's *Terrakotten* is commended by W. SCHUBART, *Deutsche Lit.-Z.*, 1927, 1301-2.

For E. BICKERMANN, *Ritualmord und Eselskult (Monatsschr. f. Gesch. u. Wiss. d. Judentums, LXXI, 1927, 171-264)* and for the literature called forth by H. I. BELL's *Jews and Christians*, I refer to §§ 3 and 4.

Magic. S. EITREM has completed his *Die vier Elemente in der Mystrienweihe (Symb. Oslo., v, 1927, 39-59)*; this very interesting paper discusses the worship of the elements in Persia and Scythia and tendencies in the same direction in Greece. (For purification by the elements discussed (p. 55), add C. H. BLINKENBERG, *La chronique du temple Lindien*, p. 25 [341]: a man hanged himself behind the cult-image, and on Delphi's bidding the Lindians removed the roof over the image and left it ἔσπε κα τρέϊς ἀλ[ε]ι γένωνται καὶ τοῖς τοῦ πατρὸς ἀγνισθῆ. The phrase cited by EITREM from Hyginus, *Fab.* 139, *ut neque caelo neque terra neque mari inveniretur*, seems to be a riddle which has become a myth.) In *Varia (Symb. Oslo., v, 86 f.)* he proposes some emendations on P. Leid. J. 395 W (that edited by Dieterich, *Abrazas*, 169 ff.). In *König Aun in Upsala und Kronos (Festschrift til Hj. Falk, Oslo, 1927, 245-61)*, he gives an interesting discussion of a Swedish parallel to the Kronos legend; p. 251, he comments on ll. 2844 ff. of the Paris magical papyrus; p. 253, on l. 1823 (significance of swallowing an object to heighten its magical properties).

The late H. GRESSMANN in *Die Aufgaben der Wissenschaft des nachbiblischen Judentums (in Zeitschr. alt. Wiss., XLIII, 1925, 11)* remarks justly that Jewish names in magic texts do not necessarily point

to Jewish practitioners of the art, and refers to Origen, *Contra Celsum*, iv, 33, for magi who invoke the God of Abraham, Isaac, and Jacob; *ib.* (11₂) he does collect instances of Jewish magicians.

It should be mentioned here that SCOTT in his *Hermetica*, II, 415-18, finds rhythmical structure akin to that of Byzantine hymns in P. Par. 1115-1166.

L. RADERMACHER in *Festschrift Kretschmer*, 1926, explains *συναρπάγη* in l. 403 as metathesis for *συναρπώση*. In *Byz.-neogr. Jahrb.*, v, 80, he explains l. 2309.

E. BICKERMANN, in a review in *Phil. Woche*, 1927, 914, gives papyrus illustrations of the killing of an animal whose power one wishes to appropriate.

K. PREISENDANZ has remarked (*Symb. Oslo*, iv, 60-1) that P. Oslo 3 is verbally identical with P. Par. 1635-1695.

L. DEUBNER supports RADERMACHER'S defence of *βαρπάχων κύκλων* in Arist. *Rhet.*, 207, by citing P. Oslo i, 233 *Βάρπαχος φρούρον* (*Hermes*, LXII, 128); W. KRANZ *ib.*, 256 adduces also *Βάρπαχος γυρίνος* in Plato, *Theat.*, 161 c.

CAMPBELL BONNER, *Traces of Thaumaturgic Technique in the Miracles. Harv. Theol. Rec.*, xx, 1927, 171-81, compares *ἐστρέναξεν, στρενάξας* in *Mark* 7. 34, 8. 12 *v.l. ἀναστ-* with P. Par. 2492, 765 ff., Leid. W. 21-9 ff. and for sense with P. Par. 537, 628 ff. and explains *ἐνεβριμῶντο* in *Mark* 14. 4 and *ἐνεβριμῶσθε* in *John* 11. 33 of inspired frenzy, comparing the historian Menander xiv, 351, Bonn., *ἐτάραξεν ἑαυτὸν* in P. Par. 620 ff., and Plut. *De def. orac.*, p. 435 c; he thus supports the Western text of *Mark* 1. 41-3.

I have not seen J. W. HAUER, *Die Dhāraṇī im nordlichen Buddhismus und ihre Parallelen in der sogenannten Mithrasliturgie* (Beitr. z. ind. Sprachwiss. u. Rel., II; Kohlhammer, Stuttgart; pp. 25-1 M. 80).

TH. HOPFNER, *Die Kinderwunden in den griechisch-ägyptischen Zauberpapyri* in *Revue d'Études dédiées à la mémoire de Y. P. Kondakov*, 1926, 65-74, studies the ancient sources in the light of modern practical knowledge of hypnosis.

R. HERZOG, *Die Zauberinnen des Sophron. Hessische Blätter für Volkskunde*, xxv, 1926, 217-29, explains the title *ταὶ γυναῖκες αἰ τῶν θεῶν φαντι ἐξελάω* as "women who say that they cause Hecate to come forth (i.e. appear and give assistance in love-magic)" refers to it the anonymous citation in Plut., *De superstitione*, p. 170 B, and gives an able reconstruction of the rite. We may compare the invocation in Orph. *Arg.*, 900 ff., discussed *J.H.S.*, XLVI, 50-3, which supports the placing here of fr. 8 (concerning the sacrifice of a dog) before the invocation. This able paper is important as confirming the view that the magic of Theoc. II substantially follows that of Sophron.

S. EITREM, *Papyri Osloenses*, I, has been reviewed by K. PREISENDANZ, *O.L.Z.*, xxx (1927), 99-100, C. JOUGUET, *Journ. des Sav.*, 1928, 32-3; for other reviews, cf. *Aegyptus*, VIII (1927), 208.

F. DORNSEIFF, *Das Alphabet in Mystik und Magie*, is reviewed by R. HALLO in *Phil. Woche*, 1926, 1089-92, O. WEINRICH in *Deutsche Lit.-Z.*, 1927, 249, M. DURRY in *Journ. des Sav.*, 1927, 281-2, H. HEPPIG in *Hessische Blätter*, xxiv, 183 f. with addenda, LIDZBARSKI in *Theol. Lit.-Z.*, 1927, 197.

K. PREISENDANZ, *Akrophilos*, has been warmly praised by S. EITREM in *Gnomon*, 1927, 176-9 (with addenda), J. LEIPOLDT in ΑΡΡΕΛΟΣ, II, 159, H. LEISEGANG in *O.L.Z.*, xxx (1927), 567.

F. LEXA, *La magie dans l'Égypte ancienne*, is commended by F. CUMONT in *Revue belge de phil. et d'hist.*, VI (1927), 459-60, H. O. LANGE in *Deutsche Lit.-Z.*, 1927, 346-8, P. P[ETER]S in *Anat. Bolland.*, XLV (1927), 129-32, M. A. M[URRAY] in *Ancient Egypt*, 1927, 27-8.

H. RANKE reviews in *Theol. Lit.-Z.*, 1927, 32, O. BRINK, *Die magische Beteueris aus dem Narmwec. in het oude Egypte* (H. J. Paris. Amsterdam, 1925), which I have not seen.

Hermetica, etc. SCOTT'S edition is reviewed by H. DELEHAYE in *Anat. Bolland.*, XLIV (1926), 409-12, A. JULICHER in *Theol. Lit.-Z.*, 1927, 175-7; vol. 2 by REITZENSTEIN in *Gnomon*, 1927, 266-83 (giving in effect a commentary on C. H. I; vols. 1 and 2 by M. DIBELIUS in *Zeits. f. K. G.*, XLV (1926), 600-1 (note also his review of O. G. v. WESENDONK, *Uraiosch und Sobch in der iranischen Überlieferung*, in *Theol. Lit.-Z.*, 1927, 243-4; vol. 2 by A. D. NOCK in *Journal*, XIII, 268; vol. 3 by H. J. ROSE in *J.R.S.*, XVI (1926), 136-7; vols. 2 and 3 and BRAUNINGER'S dissertation by F. PFISTER in *Phil. Woche*, 1927, 548-50; vol. 3 by A. PUECH in *Rev. d. anc.*, XXIX (1927), 115-16, H. LEISEGANG in *O.L.Z.*, xxx (1927), 14, A. D. N[OCK] in *J.H.S.*, XLVII (1927), 151.

REITZENSTEIN-SCHAEFER, *Studien*, has been reviewed by K. PREISENDANZ in *O.L.Z.*, xxx (1927), 789-95.

W. J. WILSON, *The career of the prophet Hermes. Harv. Theol. Rec.*, xx, 1927, 21-62, decides, pp. 37-42, that H. in writing the fifth vision had something like the *Poimandres* before him.

The late H. GRISSMANN, *Foreign influences in Hebrew prophecy* (*Journ. Theol. Stud.*, xxvii, 241-54), throws incidental light on the Potter's oracle in the course of an illuminating discussion.

A. D. NOCK, *Hermetica* (*Journ. Theol. Stud.*, xxix, 41-3), reads εἰλογήσαι in C. H. v, 10, and brackets καθὼς ὀγδοάδα ὁ Ποιμάνδρης ἐθέσπισε in XIII, 15. In *Hagiographica* (*ib.*, xxviii, 409-17) he discusses the *Confessio S. Cypriani*, explaining the initiation-scene on Mount Olympus from Hermetic and other theosophical parallels, and treating oppositional stories on the rivalry of Christians and pagans.

The paper of ROBBINS mentioned under *Astrology* is of importance for Hermetism.

Astrology. K. DIETERICH, *Hellenistische Volksreligion und byzantinisch-neugriechische Volksglaube, I Teil* (ΑΓΓΕΛΟΣ, I, 2-28; II, 69-73), is so far concerned with astrological belief and includes a full study of στοιχείον.

Of great importance is F. E. ROBBINS, *A New Astrological Treatise: Michigan Papyrus No. 1* (*Class. Phil.*, xxii, 1927, 1-45). Asklepios is quoted as an authority for the theory of the eight τόποι, I, 19, p. 14, ll. 18 ff.

Some notes on this papyrus have been published by A. E. HOUSMAN in *Class. Phil.*, xxii (1927), 257-63.

DELATTE, *Cat. Cod. astr. gr.*, x, is commended by W. KROLL in *Phil. Woch.*, 1926, 1076-7.

F. H. COLSON, *The Week*, is reviewed by R. KREGLINGER in *Rev. hist. rel.*, xciii (1926), 335-6, J. M. CREED in *Journ. Theol. Stud.*, xxviii, 328.

BOLL, *Sternglaube und Sterndeutung*, is reviewed by M. PIEPER in *O.L.Z.*, xxx (1927), 1046-9, B. A. MÜLLER in *Phil. Woch.*, 1927, 592-3.

F. GRINGER, *Der Globus*, is reviewed by H. PHILIPP in *Phil. Woch.*, 1927, 1151-2.

H. GRESSMANN, *Die hellenistische Gestirnsreligion*, is reviewed by W. ENSSLIN in *Hist. Zeits.*, cxxxvi (1927), 416, K. H. E. DE JONG in *Museum*, 1927 (Aug.-Sept.), 312.

J. G. W. M. DE VREESE, *Petron 39 und die Astrologie* (Inaug.-Diss. Amsterdam. H. J. Paris, Amsterdam, 1927. Pp. xvi+269 with one plate. 4 fl. 50), gives an elaborate astrological commentary on this chapter of the *Cena*. While some of his interpretations of Petronius are dubious, the collection of material is welcome. Reviewed by W. KROLL in *Phil. Woch.*, 1927, 904-5.

P. WUILLEUMIER, *Cirque et astrologie* (*Mél. arch. hist.*, xliv, 1927, 184-209), draws attention to *C.C.A.G.* v, 3, 127-8, and publishes with translation and full comment unprinted texts of the same sort from Ambrosianus C 222 inf. fol. 42 (13th cent.) and Parisinus graecus 2423 fol. 17 verso (12th cent.), the latter being long and more important. All three are memoranda for the astrologer to enable him rapidly to predict which colour would win in the Circus; the third quotes a special method by ὁ Ἀλεξανδρινὸς ἐκείνος Θεῖδ(ω)ρὸς πολυπειρώτατος ἐπὶ τῇ ἐπιστήμῃ γενόμενος καὶ μάλλον ἐπὶ πλέον τὰ περὶ τοῦ ἵπποδρομίου πολυπραγμονήσας, an otherwise unknown authority. The methods are based in part on the familiar colours ascribed to planets (see also p. 188, τὸν δὲ Ἥλιόν τινες μὲν βοηθεῖν τῷ ῥουσίῳ ἀπεφήναντο διὰ τὸ πυρῶδες, οἱ πλείους δὲ καλοῦσι μεσίτην πεποιήκασιν ὡς μέσον) καὶ κοινὸν ἀστέρη, where the theory of the sun's central position is used (*cf.* C. H. xvi, 7, and Cumont, *La Théologie solaire*; I prefer this to translating μέσον as WUILLEUMIER, "un astre mixte et commun"). WUILLEUMIER argues that the predictions go back to Roman times, and compares *de circo astrologos* in *Cic. de div.* I, 134 and the cosmic symbolism of the circus in Lydus, etc.

Christianity. P. Bouriant (see § 3) contains: 2, Ps. 39-41, 4th cent. leaf of papyrus codex; 3, Homily (noticed in *Anomon*, 1927, 645-6), six fragments of roll, 5th cent.; 4, Homily, 6th cent. (roll or codex?); 25, Christian letter, 5th cent.

Ory. Pap. xvii includes 2065 (Ps. xc, parchment, 5th-6th cent.); 2066 (fragment of Eccl. vi, vii, papyrus, 5th-6th cent.); 2067 (Nicene Creed, omitting ἡ κτιστοῦ in anathema clause, papyrus, 5th cent.); 2068 (possibly liturgical fragments, papyrus-roll, 4th cent.); 2069 (apocalyptic fragment, papyrus codex, late 4th cent.); 2070 (Christian treatise in dialogue form, directed against the Jews, papyrus, late 3rd cent.); 2071 (fragment of dialogue, one speaker ὁ Ἀθα[νάσιος], 6th cent.); 2072 (fragment of apology, late 3rd cent.); 2073 (fragment of homily, papyrus, late 4th cent.); 2074 (apostrophe, probably to Wisdom, in elaborate *Du-stil*, papyrus, 5th cent.).

Vol. VIII, Fasc. II of P.S.I. (see § 3 below) contains two Psalter texts: no. 921 *verso*, the early fragment noted last year (*Journal*, XIII, 92), and no. 980, a 3rd-4th cent. papyrus containing Ps. 143. 14-148, 3.

A. H. SALONIUS, *Die griechischen Handschriftenfragmente des Neuen Testaments in den Staatlichen Museen zu Berlin* (*Z. neut. Wiss.*, xxvi, 1927, 97-119) publishes with notes and two plates seven vellum fragments, six unpublished (1 of *Matthew*, 1 *Mark*, 2 *John*, 3 *Acts*) and mentions one other Gospel fragment, one *Acts*, and one of 1 *Thess.*

H. A. SANDERS, *An early papyrus fragment of the Gospel of St. Matthew in the Michigan Collection* (*Harr. Theol. Rev.*, xix, 1926, 215-26, with two plates), publishes P. Mich. 1570, which he dates near the

end of the 3rd century; it gives *Matth.* xxvi, 19-52, in a "western" text. The same writer publishes *A papyrus fragment of Acts in the Michigan Collection* (*Harv. Theol. Rec.*, xx, 1927, 1-19, with two facsimiles), P. Mich. 1571, dated on script 200-56, contains *Acts* xviii, 27-31 in a "Western" text. SANDERS remarks on the predominance of these texts in third century fragments from Egypt. This fragment has since been discussed by A. C. CLARK, *The Michigan fragment of the Acts* (*Journ. Theol. Stud.*, xxix, 18-28).

CAMPBELL BONNER, *A new fragment of the Shepherd of Hermas* (*Michigan Papyrus* 4111—*Harv. Theol. Rec.*, xx, 1927, 105-16, with two plates), publishes a text of the end of mandate II and the beginning of III, approximately of the time of Marcus Aurelius, with peculiar readings.

The Monastery of Epiphanius and New Texts from the Monastery of St. Macarius by H. G. EVELYN-WHITE, W. E. CRUM, and H. E. WINLOCK are reviewed with high praise by F. C. BURKILL, *Journ. Theol. Stud.*, xxviii, 220-5 (instructive comment), and E. J. GOODSPEED, *Journal of Religion*, vii, 1927, 482-3, the first by H. LECLERCQ in *Journal*, xiii, 25-7. See too in § 3.

The Monasteries of Wadīn Natrūn, I, is reviewed by DE LACY O'LEARY in *Journal*, xiii, 1927, 128-9.

I have not yet seen H. A. SANDERS and C. SCHMIDT, *The Minor Prophets in the Freer Collection and the Berlin Fragment of Genesis* (Univ. of Michigan Studies, Humanistic Series, vol. XXI. Macmillan Company, N.Y., 1927. Pp. xiii+436. 7 plates).

E. BURROWS, *Oxyrhynchus Logion (1907) v* (*Journ. Theol. Stud.*, xxviii, 186), quotes Talmudic parallels for hidden truth being compared with a pearl which must be extracted from its shell, suggesting that *λίθον* is a mis-translation for shell. P. Oxy. 840 has been discussed by E. RIGGENBACH, *Z. f. nat. Wiss.*, xxv, 140 ff.

S. G. MERCATI, *Ps. 90 riconosciuto nel Papirò 739* (*Biblica*, viii, 1927, 96), contributes a point on a papyrus mentioned in *Journal*, xiii, 92. 739 in his title is a slip for 759 verso.

For W. E. CRUM's important *Some further Meletian documents* (*Journal*, xiii, 1927, 19-26), I must refer to § 3.

S. G. MERCATI, *Un frammento della liturgia Clementina in papirò Aegyptus*, viii, 1927, 40-2, identifies P. Rainer 19937, ed. WESSELY in *Patr. Or.*, xviii, 434, as from the "Ante Sanctus" of the liturgy in *Apost. Const.*, viii.

H. LIETZMANN, *Ein liturgischer Papyrus des Berliner Museums. Festgabe für Adolf Jolicher*, 213-28; Mohr, Tübingen, 1927, publishes with facsimile P. Berol. 13918 (in l. 1 read *ποιμμένα ζωής*) and republishes P. Heidelb. 2 (= Bilabel, *P. Bad.*, iv, no. 58). Both belong to the last part of the Eucharist, and represent older and simpler types of liturgy which survived in the country after the official victory of the liturgy of St. Mark.

L. ST. P. GIRARD publishes, with a translation, an ostrakon containing a fragment of a magical liturgy. It consists of adjurations to various angels, to the sun, the four winds, etc. *Un fragment de liturgie magique copte sur ostrakon* in *Ann. du Serv.*, xxvii, 1927, 62-8.

C. SCHMIDT, *Studien zu den alten Petrusakten*, II. *Die Komposition* (*Z. f. Kirchengeschichte*, N.F., viii, 481-513) deals incidentally with P. Oxy. 849. His translation of *Pistis Sophia* is commended by B. VIOLET, *Theol. Lit.-Z.*, 1927, 7.

For H. DELEHAYE, *La personnalité historique de S. Paul de Thibis* (*Anal. Boll.*, xiv, 1926, 64-9), and his *Vie inédite de Saint Jean l'Aumônier*, see § 4.

W. TELFER, "Bees" in *Clement of Alexandria* (*Journ. Theol. Stud.*, xxviii, 167-78), is an instructive study of Clementine symbolism. TELFER rightly rejects the view that there is a liturgical allusion in *Paedag.*, I, vi *ad fin.*

P. ALFARIC, *Gnostiques et gnosticisme* (*Rev. hist. rel.*, xciii, 1926, 108-15), is a penetrating critique of DE FAYE's book noticed *Journal*, xii, 316. It has been reviewed also by J. COPPENS in *Re. d'hist. eccl.*, xxii (1926), 822-6, H. LEISEGANG in *O.L.Z.*, xxix (1926), 471-2, F. LOOFS, *Theol. Lit.-Z.*, 1926, 361-8 (admirable survey).

L. TH. LEFORT, *S. Pachôme et Annon-em-ope* (*Le Muséon*, xl, 1927, 65-74), points out a parallel between P.'s *Rule* and old Egyptian proverbs, and urges that in a measure old Egyptian literature lives on in Coptic.

I have not seen DENYS GORCE, *La "lectio divina" des origines du cénobitisme à S. Benoît et Cassiodore* (Picard, 1295; 20 fr.) or G. BARBY, *La vie chrétienne aux III^e et IV^e siècles d'après les papyrus* (*Revue apologetique*, xli, 1926, 643-51, 707-21; noted in *Byz. Zeit.*, xxvi, 432).

J. LEISEGANG reviews in *Phil. Woch.*, 1927, 306-7, P. HENDRIX, *De Alexanderijnsche heerszarch Basilides. Een bydrage tot de geschiedenis der Gnosis* (Amsterdam, 1926, H. J. Paris. Pp. xii+127, which

is inaccessible to me. To judge from the review it would appear to contain material of use but not to be very conclusive. See also in § 4.

J. LEBRETON, *Bulletin d'Hist. des origines chrétiennes* (in *Rech. de Sc. Rel.*, June-Aug. 1927, 329-60), is concerned *inter alia* with papyrus evidence; on p. 331 n. he refers to an unpublished papyrus.

C. DEL GRANDE, in a short review of P. Oxy. XVI, proposes a restoration of P. 1927, a liturgical text (*Ric. Indo-Grec. Ital.*, XI, 1927, 165).

VON DER GOLTZ, in reviewing LIETZMANN, *Messe und Herrenmahl* (*Theol. Lit.-Z.*, 1927, 149-51), has some remarks on the Dêr Balyzeh liturgical papyrus. He thinks that the invocation $\pi\lambda\eta\rho\omega\sigma\omega\upsilon\ \eta\mu\acute{\alpha}\varsigma\ \pi\nu\epsilon\acute{\iota}\mu\alpha\tau\omicron\varsigma\ \acute{\alpha}\gamma\iota\omicron\upsilon$ (in place of the usual $\pi\lambda\eta\rho\omega\sigma\omega\upsilon\ \tau\eta\upsilon\ \theta\upsilon\sigma\iota\alpha\nu\ \tau\acute{\alpha}\upsilon\tau\eta\nu\ \pi.\ \acute{\alpha}.$) represents an older form, whereas LIETZMANN urged (pp. 74-5) that $\tau.\ \theta.\ \tau.$ was earlier.

H. DUENSING, in reviewing BILABEL, *Koptische Fragmente über die Begründer des Manichismus*, in *Theol. Lit.-Z.*, 1926, 185, regards the fragments as "eine glossierte Rezension des Stückes VI 22 Ende bis 24 aus Cyrills Catechese" and publishes some suggestions on readings.

A. D. NOCK.

3. PUBLICATIONS OF NON-LITERARY TEXTS.

(*N.B. Miscellaneous notes and corrections of documents previously published are placed in § 9 below. Reviews are noticed here.*)

Ptolemaic-Byzantine. Part I of the third volume of the *Sammelbuch*, whose publication was recorded last year, has been reviewed by J. WOLFF (*O.L.Z.*, XXX, 1927, 1063-4) and W. SCHUBART (*Gnomon*, III, 1927, 180-1; laudatory).

I know only from the bibliography in *Aegyptus* (VIII, 208, no. 6143) a volume, probably a manual for schools or university students, by W. SCHUBART, "*Griechische Papyri: Urkunden und Briefe vom 4. Jh. v. Chr. bis ins 8. Jh. n. Chr.*, Ausgew. u. erkl. Text: Kommentar, Bielefeld, Welhagen u. Klasing, 1927."

P. Cornell I, whose appearance was noted last year, has been reviewed by WILCKEN (*Archiv*, VIII, 294-8; valuable; numerous corrections and suggestions), S. R[EINACH] (*Rev. Arch.*, XXV, 1927, 401; this part is not at present accessible to me), W. SCHUBART (*Gnomon*, III, 1927, 552-5; very severe), J. G. MILNE (*J.R.S.*, XVI, 1926, 275-6), H. B. VAN HOESEN (*Am. Journ. Phil.*, XXXI, 1927, 277), F. BILABEL (*Phil. Woch.*, XLVII, 1927, 1294-7; favourable on the whole; some suggestions), and H. I. BELL (*Class. Rev.*, XLI, 1927, 188 and *J.H.S.*, XLVII, 1927, 281-2).

HOMBERT's publication of miscellaneous texts (*Journal*, XIII, 97) has been reviewed by WILCKEN (*Archiv*, VIII, 298-302; favourable; valuable suggestions), SCHUBART (*Phil. Woch.*, XLVII, 1927, 16-17; suggestions) and E. KUHN (*O.L.Z.*, XXX, 1927, 1064-5), and part IV of P. Baden by F. Z[UCKER] (*Byz. Z.*, XXVII, 1927, 174-5), E. KISSLING (*Phil. Woch.*, XLVII, 1927, 684-5) and LEHMANN-HAUPT (*Klio*, XXI, 1926, 110-12; all favourable).

The second fasciculus, completing Vol. VIII, of P.S.I. has been issued during the year, and contains nos. 921-1000. As one or two Ptolemaic papyri are included it is noticed here, but the majority of the texts are of the Roman and Byzantine periods. The first section, nos. 921-939, consists of the Alexandria papyri edited by M. Norsa (*Journal*, XIII, 100), whose edition is here reprinted. Of the remainder the majority come from Oxyrhynchus. Many are fragmentary or of inferior interest, but others are comparatively well preserved, and there are several which contain material of value. Special reference may be made to nos. 953-956, a useful series of accounts from the Apion archive, supplementing those in P. Oxy. XVI; 961, part of a composite roll containing a lease of geese dated A.D. 176 and a receipt dated A.D. 178; 963, a lease of an *orbiopolion* dated A.D. 581; 968, a rather interesting late Ptolemaic private letter; and 975, 976, which are re-editions respectively of 504 and 632, from the Zeno archive. There are also some ostraca, edited by VIERECK. Indexes for the whole volume follow. The part contains also some literary texts and two Psalter fragments, which are noticed in §§ 1 and 2 above. *Publicazioni della Società Italiana: Papiri greci e latini*, Vol. VIII, Fasc. II. Firenze, Anonima Libreria Italiana, 1927. Pp. 89-274. L. 120. The previous part has been reviewed by F. Z[UCKER] (*Byz. Z.*, XXVII, 1927, 176-7).

An important volume of papyrus texts, which has been edited by P. COLLART, contains both literary works (noticed in §§ 1 and 2 above) and documents, the latter ranging in date from the 2nd century B.C. to the 5th or 6th century of our era but for the most part belonging to the Roman period. These are the Bouriant papyri, a collection which was formed a considerable time ago and several texts of which had previously been edited separately. Among the documents this is the case with nos. 10-12, which are letters by Plato

found at Pathyris, and 20, the well-known report of a law-case before the *Juridicus* at Alexandria edited by COLLINET and JOUGUET in the first volume of the *Archiv*. The reason for the selection of these pieces was of course their special interest, and it is good to have them here collected and indexed, but besides them there are several documents of considerable value. From the administrative point of view the most important is certainly no. 42, a long and mostly well preserved terrier and taxing roll relating to Hierakonchos and neighbouring localities in the Fayyûm. Valuable in itself, it receives an added value from the very detailed and careful editorship of Collart, who brings out of it a great amount of information as to the categories of land, their exploitation and taxation. In human interest the first place is held by no. 25, a letter from Apamea in Syria, in which an Egyptian Christian girl informs her aunt at Coptos of her mother's death. This touching letter deserves and will probably obtain a place in any future edition of DEISSMANN'S *Licht vom Osten* along with the other more intimate examples of the Graeco-Egyptian letter. Several of the other non-literary texts are of value and interest, but those mentioned are probably the outstanding items. *Les Papyrus Bourciant*, Paris, Champion, 1926. Pp. 254. 4 plates. A valuable review by WILCKEN, *Archiv*, VIII, 302-8.

Ptolemaic. The first two volumes of Edgar's publication of the Cairo Zeno papyri ('P. Cairo Zenon'), whose appearance was noted last year, are reviewed by WILCKEN (*Archiv*, VIII, 275-85), and Vol. 1 by A. PUECH (*Journ. des Savants*, 1926, 274-5). A single Zeno text from the British Museum collection has been edited by H. I. BELL. It is an interesting letter from Apollonius to Zeno announcing the coming of *theoroi* from Argos and ambassadors from Paerisades, no doubt Paerisades II, King of Bosphorus, sent by the King to see the sights of the Arsinoite nome. It is dated in 254 B.C. *Greek Sightsees in the Fayûm in the Third Century B.C.*, in *Synhologos Osloenses*, V (1927). The Zeno papyrus edited by HUNT (*Journal*, XIII, 94) is reviewed by WILCKEN (*Archiv*, VIII, 285).

W. L. WESTERMANN has published another papyrus from the Zeno archive. This is an extremely interesting and well preserved lease—or rather it is a document regarding litigation arising out of a lease, which includes (1) a copy of the lease itself, (2) an account of arrears (rent, etc.) owing by the lessee, (3) directions to Zeno's agent for the conduct of the case. The whole is well edited by WESTERMANN with a detailed commentary, and a facsimile is given. *A Lease from the Estate of Apollonius*, in *Mem. Amer. Acad. in Rome*, VI (1927), 21 pp., 2 plates.

H. I. BELL has published some Ptolemaic waxed tablets, part of a "book," acquired by PERRIN in 1889-90 and now in University College, London. They are of special interest as being the earliest examples of such tablets yet found in Egypt and also because the wax in two cases is coloured red, not, as usual, black; but the contents are also by no means without interest. They contain accounts, which clearly relate in part to a journey to the Delta; and in a short article annexed to the publication PERRIN develops, perhaps more ingeniously than convincingly, the view that the reference was to a picnic party of schoolboys. *Waxed Tablets of the Third Century B.C.*, and *A Ptolemaic Holiday*, in *Ancient Egypt*, 1927, Sept., 65-74, and 75-6.

A publication by P. JOUGUET of a Magdola papyrus is at present inaccessible to me but is referred to in the bibliography in *Aegyptus*, VIII, 208, no. 6130. *Une nouvelle requête de Magdola*, in *Rivista Romanologica*, Milano, 1927, 381-90.

F. ZUCKER has published an interesting letter dated in the year 226 B.C. It is addressed to the writer's sisters and asks for further information supplementary to that contained in an *ἔπιστολις* in a dispute concerning an inheritance. It is juristically of some value. A facsimile is given. *Griechische Urkunde oberägyptischer Herkunft aus einem Erbstreit v. J. 226 v. Chr.*, in *Cartonnâtes-Epistolaria*, 168-80.

During the year under review Part 3 of the Freiburg papyri, edited by J. PARTSCH and, after his death, prepared for publication by U. WILCKEN, has appeared. PARTSCH'S MS., at the preparation of which he had worked for several years in such time as he could spare from other occupations, was almost ready for publication, but WILCKEN had undertaken to communicate certain corrections of his own in an appendix. Later revisions yielded further readings, affecting radically in some cases the interpretation of the documents; and eventually it was decided, in consultation with GRADEXWITZ, to publish PARTSCH'S MS. unaltered and to add an appendix (actually longer than PARTSCH'S portion of the volume) in which WILCKEN states the results of his revision and his own interpretation wherever this diverges from that of PARTSCH. The decision, in the circumstances, was perhaps justified, but it certainly entails great inconveniences. PARTSCH'S commentary, obviously of great importance in view of his mastery of the subject, is not infrequently "in the air" because, on looking at the appendix, one finds that the readings on which his views were based cannot be maintained; and one has continually to turn from text to appendix in order

to discover what the true reading is. But the position was certainly a difficult one, and it goes without saying that a work which contains the results of the labours of two such authorities is of prime importance. The papyri are all Ptolemaic, and the majority form fragments of a single roll containing copies of documents written in the year 179-8 B.C. As to the nature of this roll WILCKEN inclines to a different view from that of PARTSCH. All the fragments are very imperfect, and indeed the whole collection is disappointing at a first glance. It is only the constructive genius of the two editors which brings out its real value and significance. *Mitteilungen aus der Freiburger Papyrussammlung. 3. Juristische Urkunden der Ptolemäerzeit.* (*Abh. d. Heidelberger Ak.*, Phil.-hist. Kl., 1927, 7. Abb.) Heidelberg, Carl Winter, 1927. Pp. ix+112.

WILCKEN publishes from the Freiburg collection a petition addressed to the village scribe of Philadelphia by a cleric and a *ἱερεὶα Συρίων θεῶν* and makes it the occasion for a valuable discussion of the Syrian cult. An *Ἀραγατιέων* is mentioned in the petition, and also a *Μητροῶν*. *Zu den "Syrischen Gottern,"* in *Festgabe für Adolf Deissmann*, 1927, 1-19. In *Archiv*, VIII, 287, WILCKEN gives a note on this publication, with a small text correction.

An important event during the year is the appearance of Part IV of Vol. I of WILCKEN'S great undertaking generally referred to as U.P.Z. This part, which contains pp. 453-676, concludes the volume, and contains the "Nachträge und Verbesserungen," a useful "Serapeus-Chronik," giving a chronological table of events, the indexes to the volume (the full index verborum is reserved for Vol. II), and two plates, showing the Dresden papyrus. The texts are of a miscellaneous kind but include several very important documents. With them is completed the publication of the Memphis papyri, and WILCKEN is to be heartily congratulated and thanked on the conclusion of the first part of his task. *Urkunden der Ptolemäerzeit (Ältere Funde)*. See notices in earlier instalments of this bibliography. This part is reviewed by P. M. MEYER (*Z. vergl. Rechtsw.*, XLIII, 467-72).

Two publications of documents in other languages than Greek may be mentioned as an appendix to this division. M. LIDZBARSKI has published an Aramaic ostracou of the 4th or 3rd cent. B.C. (year 33 of Artaxerxes II, Ptolemy I, or Ptolemy II) bought by SPIEGELBERG at Luxor in January 1927. It is a receipt for salt-tax. *Epigraphisches*, in *O.L.Z.*, xxx (1927), 1043-4. WILCKEN has published a note on SORTAS'S P. Lille dém. I, which had hitherto been inaccessible to him (*Archiv*, VIII, 285-6).

Ptolemaic-Roman. E.G.U. VII (see *Journal*, XIII, 98) has been reviewed by WILCKEN (*Archiv*, VIII, 288-94; important as usual) and SAN NICOLÒ (*O.L.Z.*, xxx, 1927, 477-9; specially from the legal side). WILCKEN has also published a belated review or rather perhaps a note (with new readings) on the two papyri published by Khaviasar and Kugeas as long ago as 1913 in *Ἀρχαιολογ. Ἐφημερίς*. *Archiv*, VIII, 287-8.

Roman. OLSSON'S *Papyrusbriefe* has been reviewed by W. OTTO (*Phil. Woch.*, XLVII, 1927, 50-1), W. SCHUBART (*O.L.Z.*, XXIX, 1926, 407), and M. HOMBERT (*Rev. belge de Phil.*, VI, 1927, 287-9).

H. HENNE has continued his publication of the Graux papyri, his new instalment containing nos. 3 to 8, which are as follows: 3. Oath of A.D. 51, that a shepherd from Philadelphia is not being concealed. A new strategus occurs. 4. A.D. 248, Philadelphia. An interesting petition in a case of assault (an *Ἀραβοτοξότης* of 80 years of age occurs). 5. A.D. 44. Bank *διεγβολή* (a difficult document, as the formula is not clear). 6. A.D. 148. The same class of document as P. Oxy. 1639, etc. 7. A.D. 221, Philadelphia. Loan of money (in l. 1 for *βουλος* qu. *βου(κό)λος*?). 8. A.D. 221, Philadelphia. Repudiation of a lease in consequence of *ἀσροχία*. This and the previous instalment are reviewed together by WILCKEN (*Archiv*, VIII, 310-12).

WILCKEN reviews (*Archiv*, VIII, 308) BOAK'S *Alimentary Contracts* (see *Journal*, XIII, 101).

C. C. EDGAR has published some papyrus fragments from Oxyrhynchus, all but one of which are literary and have therefore been noticed in § 1 above. The exception is a letter from Teos, a *ἱερογλύφος* and probably the person who occurs in P. Oxy. 1029, to his father Onnophris about a summons from the centurion at Akoris to the *ἱερογλύφοι* to go up to that place. It dates from the reign of Domitian. *Fragments of Papyri from Oxyrhynchus*, in *Ann. Serv.*, XXVI, 203-10. Reviewed by WILCKEN (*Archiv*, VIII, 309-10).

A review in *Μουσείον*, III (1927), 184, of THUNELL'S *Sitologen-Papyri* is known to me only from the bibliography in *Aegyptus* (VIII, 209, no. 6146).

The Michigan ephebic document edited by BELL (*Journal*, XII, 245 ff.) is reviewed by WILCKEN (*Archiv*, VIII, 309). It has occasioned the publication of two other documents relating to ephebi. One, at Berlin, which furnishes a useful parallel to P. Oxy. 477, is edited from SCHUBART'S transcript of the original by H. I. BELL. *A Parallel to Wilcken*, Chrest. 144, in *Journal*, XIII, 219-21. The other, at

Michigan, is edited, with a more detailed commentary, by A. E. R. BOAK. *The Epikrisis Record of an Ephebe of Antinoopolis found at Karanis*, *ibid.*, 151-4. Both are of the 2nd century; the Michigan document is particularly useful, yielding several new pieces of information.

R. CAGNAT reviews the Latin document published by SANDERS (see *Journal*, XIII, 100), reproducing the text and adding some notes (one suggestion for reading). *Nouveau papyrus latin d'Égypte*, in *Journal Sac.*, 1926, 268-70. He has also published an article on the Latin tablets containing extracts of notifications of birth, in which he republishes the Kelsey tablets, those in B.G.U. VII, and then the other examples, and adds some valuable notes. $\Upsilon\Omega$ suggests for the formula *c. c. c. ad k.* the extension *c. ontali. r. dege* (*exemplum*) *ad k. artome*. *Extraits de Naissance Égyptiens*, *ibid.*, 1927, 193-202.

H. HENNE publishes a papyrus of the Cairo Museum which contains a petition of A.D. 186 concerning the theft of a $\tau\epsilon\lambda\epsilon\acute{\iota}\alpha$ $\chi\omicron\upsilon\pi\omicron\delta\epsilon\lambda\phi\alpha\zeta$. It comes from Theadelphia. Reviewed by WILCKEN (*Archiv*, VIII, 312).

J. G. WINTER has published a small but extremely interesting collection of letters from the Michigan collection. They are miscellaneous in origin, but they have a certain common interest in that they relate in one way or another to persons on military service. The first two, which are also those most likely to make a popular appeal, are two excellently preserved letters found together at Karanis in the autumn of 1926, both from a youth named Apolmaris (*see*) to his mother and written, the first from Ostia, the second, a few days later, from Rome. We learn that he had been drafted to Misenum and that he thought Rome "a fine place." The date is about A.D. 200. No. 3 is from Sempronius to his son Gaus on his enlistment; early 2nd century. Sempronius is much upset by the report that his son had not enlisted in the fleet. 4. Time of Hadrian. Julius Clemens, a centurion of the legio XII Deiotariana to Socraton. 5. Time of Trajan? Interesting letter written from Pselkis to Karanis. 6. 3rd century. Longinus Celer to his brother Maximus. Refers to the supply of bread to soldiers at Taposiris, one day's journey from Alexandria. *In the Service of Rome: Letters from the Michigan Collection of Papyri*, in *Class. Phil.*, XXII (1927), 237-56.

I know only from a review by R. HOLLAND (*Phil. Week.*, XLVII, 1927, 979-81), a publication by G. ZERETELI of a 2nd century letter from Ammonius to Apion concerning fish (in *Revue de Théologie*).

WILCKEN reviews the 3rd century lease published by VAN HOLSSEN and JOHNSON (see *Journal*, XIII, 101). *Archiv*, VIII, 310.

J. G. WINTER has published an extremely interesting small archive of family letters from the Michigan collection. They date from the time of Diocletian, and consist of: four letters from Paniskos to his wife Plutogenia; one from the same to his wife and daughter; one to his brother; one from Plutogenia to her mother. The letters are rich in human interest and have moreover other interesting features. Notably, though in most the family is clearly Christian, one letter is as obviously pagan. Is this a case of conversion or of relapse under persecution? If WILCKEN is right, as he well may be, in suggesting that the Achilleus mentioned in one of the letters is the well-known usurper of the name *Zur Geschichte des Usurpators Achilleus*, in *Stzgsber. Pr. Ak.*, 1927, 270-6, the last idea must be rejected. *The Family Letters of Paniskos*, in *Journal*, XIII, 1927, 59-74. 3 plates.

Roman-Byzantine. The British Museum volume, *Jews and Christians in Egypt*, is the subject of an interesting and valuable review by W. HENGSTENBERG (*Byz. Z.*, XXVII, 1927, 138-45). See also below, in the following division (*Byzantine*) and in § 9.

The chief item in this division, and probably the most important miscellaneous collection of papyrus published during the year is P. OXY. XVII, issued as a memorial volume to Prof. GRENFELL and containing, as a frontispiece, an excellent portrait of him. The valuable literary texts in this volume are dealt with in §§ 1, 2, 6, but the non-literary texts are in their own way not less noteworthy. A rescript of Severus Alexander (no. 2104) is unfortunately too much mutilated to yield much definite information, and even more imperfect is an edict by a prefect relating to a triennial contest in honour of Livia and some other person (2105), but 2106, a 4th-century letter from a prefect ordering the collection of a quantity of gold to be sent to Nicomedia, is well preserved, though the prefect's name is lost. Three other important official documents follow, and still more valuable is 2110, a well-preserved papyrus recording proceedings in the senate in A.D. 370. 2111 is a report of cases before the prefect Petronius Mamertinus; 2113-2115 are official letters, each with something of importance; and there are several other papyri among the official documents which offer points of outstanding interest. Among the petitions may be mentioned 2130, an application (A.D. 267) to the board of gymnasiarchs of Oxyrhynchus from a senator of Antinoopolis; 2131, a document of the same nature as B.G.U. 970 but better preserved; and 2134, a long and well preserved application for the registration of a mortgage (about A.D. 170). Among the contracts, 2136,

a sale of a boat in the form of a lease (A.D. 291), calls for special notice. There are a number of letters, several of them offering points of interest; 2153, concerning an intended voyage by ἡ μική ("the little girl"), 2154, 2155, and 2156 are specially worthy of mention. *The Oxyrhynchus Papyri*, Part xvii. Edited by ARTHUR S. HUNT. London, Egypt Exploration Society, 1927. Pp. xv + 313. 4 plates and portrait.

M. NORSNA's edition of some Alexandria papyri, which as already mentioned has now been reprinted in P.S.I. VIII, is reviewed by WILCKEN (*Archiv*, VIII, 312-14).

G. MANTEUFFEL, a new recruit to the ranks of papyrology, has produced a meritorious edition of some private letters in the Berlin collection. These are:—1. Pap. Berol. 13897, early 4th century. Christian, probably from the same persons as P. Oxy. 1774 (which he reprints); 2. P. Berol. 13989, mid 3rd century. A set of four letters on one sheet. Both papyri are distinctly interesting. *Epistulae privatae ineditae*, in *Eos*, xxx (1927), 211-15.

Byzantine. WILCKEN reviews the fragment relating to liturgies edited by VAN HOESEN and JOHNSON (see *Journal*, XIII, 101), which he holds to date from the early 4th century rather than the early 3rd as the editors supposed (*Archiv*, VIII, 314).

W. E. CRUM edits another Coptic Meletian letter from the archive published in *Jews and Christians in Egypt* which has been acquired by the British Museum since the appearance of that volume. A facsimile is given, and the Coptic is translated. In connection with this letter he notes further references to the Meletians supplementary to those collected in *Jews and Christians*, and publishes two Coptic theological texts. *Some Further Meletian Documents*, in *Journal*, XIII (1927), 19-26.

ENSSLIN'S *Prozessvergleich* (see *Journal*, XIII, 116) is reviewed by WILCKEN (*Archiv*, VIII, 314-15) and F. Z[UCKER] (*Byz. Z.*, xxvii, 1927, 177-8).

The Metropolitan Museum volume, *The Monastery of Epiphanius* (see *Journal*, XIII, 102) has been reviewed by C. H. KRAELING (*Am. Journ. of Arch.*, xxxi, 1927, 129-30), W. SPIEGELBERG (*O.L.Z.*, xxx, 1927, 678-9), and P. P. (*Anal. Bolland.*, xlv, 1927, 393-8). See too in § 2.

Arab. JERNSTEDT'S P. Ross.-Georg. IV (see *Journal*, XIII, 103) has been reviewed by WILCKEN (*Archiv*, VIII, 315-16) and H. I. BELL (*Journal*, XIII, 1927, 269-71); BELL'S *Two Official Letters* (*ibid.*, 103) by WILCKEN (*Archiv*, VIII, 316) and F. Z[UCKER] (*Byz. Z.*, xxvii, 1927, 179-80); and GROHMANN'S vol. I of the Arabic Series of *Corpus Pap. Raineri* by M. SOBERNHEIM (*D. Lit.-Z.*, 1927, 256-8).

Among some Coptic ostraca from Thebes published by A. MALLON are four of the 7th-8th century which contain harvest accounts, and one (7th century) which contains a letter. *Quelques Ostraca coptes de Thèbes*, in *Rev. de l'Égypt. anc.*, I (1925-7), 152-6.

H. I. BELL.

4. POLITICAL HISTORY, BIOGRAPHY, ADMINISTRATION, TOPOGRAPHY, CHRONOLOGY.

General. The fourth volume of PETRIE'S *History of Egypt*, originally written by MAHAFFY, has been put into the capable hands of E. R. BEVAN for revision, with the result that the third edition is practically a new book, giving a complete survey of our present information on the Ptolemaic period. *A History of Egypt under the Ptolemaic Dynasty*. London, Methuen, 1927.

C. F. LEHMANN-HAUPT contributes to the memorial volume *Ἐπιπέρισμα Heinrich Swoboda dargebracht* (Reichenberg, 1927), pp. 142-65, an article *Vom pyrrischen und ersten syrischen zum chremonideischen Kriege*, criticizing Sidney Smith's Babylonian evidence and linking up the Syrian war with the struggles in Europe.

The second volume of KAERST'S *Geschichte des Hellenismus* is reviewed by C. W. in *Historisches Jahrbuch*, XLVII (1927), 126, by W. W. TARN in *Class. Rev.*, xli (1927), 149, and by H. PHILIPP in *Phil. Woch.*, XLVII (1927), 1246-7.

W. SPIEGELBERG'S *Die Glaubwürdigkeit von Herodots Bericht über Aegypten* is reviewed by P. A. A. BOESER in *Museum*, 1927, 244.

C. C. EDGAR reviews JOUQUET'S *L'impérialisme macédonien* (see *Journal*, XIII, 103) in *Journal*, XIII, 268-9.

The Hellenistic Age (see *Journal*, xi, 97) is reviewed by J. R. LUKEŠ in *Phil. Woch.*, XLVII (1927), 1144-7.

Of general works upon the history of Egypt under the Christian emperors it would seem that there is nothing to report. Thus MATTHIAS GELZER'S appeal (cf. *Journal*, XIII, 104) for a renewed study of this ebenso vergangenheitsbelastete wie zukunftsweisende Epoche is timely. *Hist. Z.*, cxxxv (1927), 173-87. OTTO SEUCK'S *Regesten* has been reviewed by F. DOLGER in *Byz. Z.*, xxvi (1926), 393-8. He questions some

of the principles on which SEECK corrected the text of the imperial constitutions. O. BARDENHEWER'S *Geschichte der altkirchlichen Literatur* (vols. 3 and 4) has been reviewed with bibliographical supplements by F. DREXL, *ibid.*, 391-3, and E. SCHWARTZ'S *Acta Conciliorum oecumenicorum*, t. I, vol. v (on the Council of Ephesus) has been reviewed by LEBON in *Revue d'histoire ecclésiastique*, XXII (1926), 832-6. For the development of the imperial cult reference may be made to the review by KAHRSTEDT in *Hist. Z.*, CXXXVI (1927), 90-6, of F. KAMPERS' *Vom Werdgang der abendländischen Kaisermystik* (Leipzig, 1924) and to the review of the same work by HARALD FUCHS in *Gnomon*, II (1926), 612-16. JEAN MASPERO'S *Histoire des patriarches*, etc., has been reviewed by LEBON in *Revue d'histoire ecclésiastique*, XXII (1926), 592-4. N. H. BAYNES has attempted to explain the references to Egypt in the *Historia Augusta*. *The Historia Augusta: its Date and Purpose*. Clarendon Press, Oxford, 1926, 65-6, 109, 141-2. LOUIS BRÉHIER has considered recent publications on the later Empire in *Revue historique*, CLIII (1926), 193-225.

Political history and position of nationalities. LILY ROSS-TAYLOR discusses the evidence to be derived from the Alexander romance. *The Cult of Alexander at Alexandria*, in *Class. Philol.*, LXII (1927), 162-9.

ERNST MEYER, *Alexander und der Ganges* (*Klio*, XXI, 1927, 183-91), may be noted for criticism of "Alexander-historians."

G. RADET deals with Alexander's visit to the oracle of Ammon, *Notes sur l'histoire d'Alexandre. VI. Le pèlerinage au sanctuaire d'Ammon*. *Rev. ét. anc.*, XXVIII (1926), 213-40.

An article in *The Times*, Jan. 7th, 1927, on the same point, suggests that the motive of the visit was military. *Pilgrim or Spy? Alexander in the Oasis*. Criticized by D. G. HOGARTH, *ibid.*, Jan. 14th, and reply Jan. 20th, and by S. R[FEINACH] in *Rec. Arch.*, XXV (1927), 235-6.

H. BERVE'S *Das Alexanderreich auf prosop. Grundlage* is reviewed by U. WILCKEN (*D. Lit.-Z.*, XLVII, 1927, 359-66), by W. W. TARN (*Class. Rev.*, XLI, 1927, 39), and by C. C. EDGAR (*Journal*, XIII, 1927, 298).

EHRENBERG'S *Alexander und Aegypten* (see *Journal*, XIII, 104) is reviewed by J. KAERT (*Hist. Zeits.*, 136, 1927, Heft 2, 306-8), by H. P. BLOK (*Museum*, 1927, 305-6), by A. H. (*Hist. Jahrb.*, XLVI, 1926, 661-2), by E. MEYER (*D. Lit.-Z.*, XLVII, 1927, 37), by F. HEICHELHEIM (*Phil. Woch.*, XLVII, 1927, 425-8), and by U. KAHRSTEDT (*Or. Lit.-Z.*, XXX, 1927, 474-7).

FRITZ GEYER'S *Alexander der Grosse und die Diadochen* is reviewed by H. BERVE (*Gnomon*, 1927, 127-8), by F. HEICHELHEIM (*Hist. Zeits.*, 135, 1927, 316-17), and by R. WAGNER (*Phil. Woch.*, XLVII, 1927, 391-3).

KORNEMANN'S *Satrapenpolitik des ersten Lagiden* (see *Journal*, XIII, 104) is reviewed by C. F. LEHMANN-HAUPT in *Klio*, XXI, 1926, 108-10.

The article by E. CUG, *La condition juridique de la Coelé-Syrie au temps de Ptolémée Épiphane* (*Syria*, 1927, 143-62), has historical as well as juristic importance (see also § 6).

Reference should also be made here to L. ROSS-TAYLOR, *The "Proskynesis" and the Hellenistic Ruler Cult* (*J.H.S.*, XLVII, 1927, 53-62) (see also § 2), and to E. BICKERMANN, *Beiträge zur antiken Urkundengeschichte*, I. *Der Heimatsvermerk und die staatsrechtliche Stellung der Hellenen im ptolemäischen Aegypten* (*Archiv*, VIII, 216-39) (see also § 6).

V. TSCHERIKOWER, *Die hellenistischen Stadtgründungen von Alexander dem Grossen bis auf die Römerzeit*. Pp. xi+216. Leipzig, 1927, is reviewed by F. HEICHELHEIM in *Phil. Woch.*, XLVII (1927, 1247-53), and by S. R[FEINACH] in *Rec. Arch.*, XXVI (1927), 192.

SPIEGELBERG'S *Beiträge zur Erklärung des neuen Priesterdekretes* (see *Journal*, XIII, 105) is reviewed by C. F. LEHMANN-HAUPT in *Klio*, XXI (1926), 107-8.

HEICHELHEIM'S *Auswärtige Bevölkerung im Ptolemäerreich* (see *Journal*, XIII, 105) is reviewed by H. KEES in *G.G.A.*, 1926, 172, by H. PHILIPP in *Petermans Mitt.*, LXXII (1926), 29, and by H. BERVE in *Phil. Woch.*, XLVI (1926), 1116-21.

U. KAHRSTEDT'S *Syrische Territorien in hellenistischer Zeit* is reviewed by R. LAQUEUR in *Gnomon*, 1927, 527-36.

SCHUBART'S *Griechen in Aegypten* (see *Journal*, XIII, 105) is reviewed by P. COLLART (*Rev. de philol.*, ser. 3, I, 1927, 272-3), by A. LESKY (*D. Lit.-Z.*, 1927, 1199-1200), by F. MUNZER (*Or. Lit.-Z.*, XXX, 1927, 937-8), by A. GODINA (*Aegyptus*, VIII, 1927, 200-201), by H. I. BELL (*Journal*, XIII, 1927, 272), by J. R. LUKES (*Listy Filol.*, LIII, 1926, 291-3), by F. W. VON BISSING (*Phil. Woch.*, XLVII, 1927, 1553-6), and by E. BICKERMANN (*Gnomon*, III, 1927, 671-5).

VAN GRONINGEN'S *Hellenisme op Vreemden Boden* (see *Journal*, XIII, 105) is reviewed by A. KRAEMER (*Phil. Woch.*, XLVII, 1927, 118-29) and by M. HOMBERT (*Rec. Belge Phil.*, V, 1926, 217).

PRIDIK'S *Mitregent des Königs Ptolemaios II* (see *Journal*, XIII, 105), is reviewed by E. KUHN (*Or. Lit.-Z.*, XXX, 1927, 161-6).

ERNST MEYER'S *Die Grenzen der hellenistischen Staaten in Kleinasien* is reviewed by M. ENGERS in *Museum*, xxxiv, 1927, 102-3.

The Jewish question at Alexandria continues to excite some interest. S. REINACH criticizes STUART JONES (see *Journal*, xiii, 107) and holds to his own theory. *Claude et les Juifs Alexandrins* in *Rev. Arch.*, xxv (1926), 242. R. LAQUEUR, in *Griechische Urkunden in der jüdisch-hellenistischen Literatur* (*Hist. Z.*, 136, 1927, 229-52) refers to the letter of Claudius and WILLRICH'S theory of two Jewish embassies, which he rejects. E. BRECCIA gives a summary of the interpretations of the letter in a lecture delivered on 18 April, 1927. *Juifs et Chrétiens de l'ancienne Alexandrie*. Alexandria. Soc. de Publ. Égypt. 1927. Pp. 30. 6 plates. From *Aegyptus* we have references to H. LICHTENSTEIN, *Zur Geschichte der Juden in Alexandria* in *Mon. Schr. Gesch. Wiss. Jud.*, lxxix (1925), 357-61, and to R. MATTÄ, *Gli "Atti di martiri" Alexandrini* in *Didaskaleion*, N.S., iv (1926), 49-84.

BELL'S *Juden und Griechen* (see *Journal*, xiii, 106) is reviewed by S. R[EINACH] in *Rev. Arch.*, xxv (1926), 276, by M. WELLNHOFER in *Hist. Jahrb.*, xlvii (1927), 130-1, by S. GASELEE in *Class. Rev.*, xli (1927), 87, by H. WILLRICH in *D. Lit.-Z.*, 1927, 150-1, by F. HEICHELHEIM in *Phil. Woch.*, xlvii (1927), 1148-51, in *Num. Lit. B.*, xlvi (1927), 2128, by A. JÜLICHER in *Christl. Welt*, xli (1927), 440-1, by J. VOGT in *Or. Lit.-Z.*, xxx (1927), 759-61, by J. G. MILNE in *Journal*, xiii (1927), 124-5, and by E. BICKERMANN in *Gnomon*, iii (1927), 671-5.

VON PREMIERSTEIN'S *Alexandrinischen Märtyrerakten* is reviewed by F. BILABEL in *Phil. Woch.*, xlvii (1927), 836-9.

The technical sense of the term *ἀσσοί* is discussed by E. BICKERMANN, who concludes that it denoted the citizens of Alexandria enrolled in demes, whereas *Ἀλεξανδρεῖς*, under the later Ptolemies and the Romans, were "citoyens de moindre droit," not members of demes. *À propos des ἀσσοί dans l'Égypte gréco-romaine* in *Rev. de Phil.*, 3 Sér., i (1927), 362-8.

Administration. The constitutional inscription of Cyrene (see *Journal*, xiii, 107) has been discussed in several papers, two by G. DE SANCTIS, *La Magna Charta della Cirenaica* in *Riv. di Filol.*, liv (1926), 145-76, and *Le Decretale di Cirene* in *Riv. di Filol.*, lv (1927), 185-212, by F. HEICHELHEIM, *Zum Verfassungsdiagramma von Kyrene*, in *Klio*, xxi (1927), 175-82, who dates it in 308, and by TH. REINACH, *La charte Ptolémaïque de Cyrène*, in *Rev. Arch.*, xxvi (1927), 1-32, who places it in 322 or 321.

COLLOMP'S *Chancellerie et diplomatique des Lagides* (see *Journal*, xiii, 107) is reviewed by W. W. TARN in *Class. Rev.*, xli (1927), 201-2.

H. HENNE publishes in *Bull. Inst. fr. d'Arch. Or.*, xxvii (1927), 25-7, *Notes sur la stratégie*. I, *Sur les stratégies de l'Arsinoïte au 1^{er} siècle après J.C.* II, *Note sur le Périthèbes à l'époque romaine*.

G. FLORE, *Sulla Βιβλιοθήκη τῶν ἐγκτήσεων* (*Aegyptus*, viii, 1927, 43-88) should be noted here as well as in § 6.

Biography. Reference may be made to R. PFEIFFER, *Arsinoe Philadelphos in der Dichtung*, in *Die Antike*, ii, 3, 161-74.

N. AIMÉ-GIRON finds the name of a new epistrategus in an inscription of Denderah. *Réfection du mur d'enceinte du grand temple de Dendérah sous Tibère* (*Ann. Serv.*, xxvi, 1926, 109-12 and xxvii, 1927, 48).

L. CANTARELLI'S paper *Per l'amministrazione e la storia dell'Egitto Romano*. v, *Il viaggio di Seneca in Egitto* in *Aegyptus*, viii (1927), 89-95, comes under this head.

C. CICHORIUS writes on *Der Astrologe Ti. Claudius Balbillus, Sohn der Thrasyllus*, in *Rhein. Mus. f. Phil.*, N.F., lxxvi (1927), 102-5.

B. A. VAN GRONINGEN reconstructs a fragmentary inscription from Koptos, with the name of a new prefect—Valerius—in 3 Severus Alexander. *Inscriptio dedicatoria Aegyptiaca* in *Mnemosyne*, lv (1927), 263-8.

U. WILCKEN, dealing with the Paniskos letters (see *Journal*, xiii, 59-74), traces their connection with the revolt of Achilleus and finds in Firmus and Achilleus nationalist leaders against Rome. *Zur Geschichte des Usurpators Achilleus* in *Sitzungsb. Pr. Akad.*, 1927, 270-6.

P. HENDRIX, *De alexandrijnsche haeresiarch Basilides*, has been reviewed by J. COPPENS in *Revue d'histoire ecclésiastique*, xxiii (1927), 73-75. (See also § 2.) AUGUSTINE FITZGERALD'S *The Letters of Synesius of Cyrene* has been reviewed by N. TERZAGHI in *Byz. Z.*, xxvi (1926), 381-4. TERZAGHI accentuates the doubts which surround the chronology of the life of Synesius. That chronology is largely based on *argumenta e silentio*, and the validity of such arguments depends upon our answer to the question: How far is our collection of letters complete? What if many letters have not been preserved? It is indeed improbable that Synesius only wrote 150 letters. Fitzgerald contends in his preface that Synesius was a Platonist.

rather than a Neoplatonist, and reduces to a minimum the influence of Plotinus. TERZAGHI would lay more weight upon the Alexandrian period of the life of Synesius: Plato is not the only source of his thought: to explain the hymns or such works as the *De Insomniis* not even Neoplatonism or Plotinus suffices. Here we must include gnosticism and magic, "οὐ τῆς ἀστρολογίας ὀριαντῆς ἰν γενερῆ ἐδ ἐγζῆσαν ἰν ἰσπεκί"; cf. the letter to Peomus *de dono astrolabu*. The contacts are too close "per non farci credere che tutto il fiorire di letteratura gnostica e magica non fosse ben noto a lui e non fosse anche, per molta parte, passato a costituire un nucleo centrale e sostanziale del lavoro intellettuale di questo autore." NORMAN H. BAYNES, in a review of the same book, *Eng. Hist. Review*, XLII (1927), 416-18, has supplemented the bibliography of recent work on Synesius. J. GEFFCKEN has written a paper on *Kingsley's Hypatia and ihr geschichtlicher Hintergrund*, in *Neue Jahrbuecher*, II (1926), 150-5. The article of THEODOR HERMANN, *Zur Chronologie des Kyrill von Scythopolis*, in *Z. für Kirchengesch.*, XLV (1927), 318-19, has an interest for students of Christian Egypt, since it is useful for the general chronology of the Monophysite controversy. W. ENSSLIN has suggested that the Maximinus who was sent as envoy to Attila in 448 is possibly to be identified with the *dux* of the Thebaid who concluded a peace treaty with the Blemyes in 453. *Maximianus und sein Begleiter, der Historiker Priskos*, in *Byzantinisch-neugriechische Jahrbuecher*, V (1926), 1-9. N. H. BAYNES has attempted to show that the *στρατηλάτης* Eustathius who carried the *Ethosias* in December 638-9 to Cyrus in Alexandria cannot be identified with the *μάγιστρος* of the same name who took part in the ceremonies described in Const. Porph. *De Ceremoniis*, II, 29, for *μάγιστρος* always = *magister officiorum*. A Note on the Chronology of the Reign of the Emperor Heraclius, in *Byz. Z.*, XXVI (1926), 55-6, was against A. JULICHER in the Harnack *Festschrift*, Tübingen, Mohr, 1921. The most important biographical contribution of the year is H. DELEHAYE'S publication of a new version of the Life of John the Almsgiver. *Une Vie inédite de Saint Jean l'Aumônier*, in *Anal. Boll.*, XLV (1927), 5-74. This is derived from MS. Gr. 349 of the Library of S. Mark at Venice. The Venice text, concludes PÈRE DELEHAYE, is like that of the Metaphrast, a compilation in which the biography of Leontius has been combined with that of Sophronius; it is older than the Metaphrastic version which is derived from it and it preserves infinitely better than the Metaphrastic text the account of Sophronius.

Topography. H. I. BELL has published the interesting lecture on *Alexandria* which he delivered to the Society last year, adding references where material. *Journal*, XIII (1927), 171-84.

Some useful information as to Jewish burials at Alexandria is included in BRECCIA'S *Juifs et Chrétiens* mentioned above.

Chronology. ERNST MEYER'S *Untersuchungen zur Chronologie der ersten Ptolemäer* (see *Journal*, XIII, 110) is reviewed by W. ENSSLIN in *Phil. Woch.*, XLVII (1927), 876-8.

A. E. R. BOAK discusses the Egyptian names of the months under Caligula. ΜΗΝ ΔΡΟΥΣΙΑΒΗΘΣ. *Journal*, XIII (1927), 185-6.

C. E. VAN SICKLE, for *The Terminal Dates of the reign of Alexander Severus*, uses the evidence of Egyptian papyri. *Class. Phil.*, XXII (1927), 315-17.

H. MATTINGLY continues the argument about the regnal years of the Emperors in the third century (see *Journal*, XIII, 110) in *Notes on the Chronology of the Roman Emperors from Valerian to Diocletian* (*Journal*, XIII, 1927, 14-18). See also the pre-ent number.

J. G. MILNE,
N. H. BAYNES.

5. SOCIAL LIFE, EDUCATION, ART, ECONOMIC HISTORY, NUMISMATICS AND METROLOGY.

General. W. OTTO'S *Kulturgeschichte des Altertums* (see *Journal*, XIII, 110) is reviewed by B. MEISSNER (*Or. Lit.-Z.*, XXIX, 1926, 398-400) and A. CALDERINI (*Aegyptus*, VIII, 1927, 204-5).

M. ROSFOLZJEFF'S *Social and Economic History* (see *Journal*, XIII, 110) is reviewed by R. CAGNAT (*Journ. des Sav.*, 1926, 426-8), F. MUNZER (*Or. Lit.-Z.*, XXIX, 1926, 982-5), G. RADET (*Rev. d. anc.*, XXIX, 1927, 119-21), and G. DE SANCTIS (*Riv. di Filol.*, LIV, 1926, 537-54).

E. CAVAIGNAC, *Sur l'attribution des fragments de papyrus* (see above, § 1), may be noted as useful for the purposes of this section.

Social life. W. OTTO contributes a paper to the *Ἐπετέμειον Σκοβοδι* (pp. 194-200) entitled *Zum Hofzeremoniell des Hellenismus*, in which he traces the custom of bearing a light before a monarch from Persia through Hellenistic Kingdoms to Rome, noting particularly the *φωσφόρος* of Kleopatra III.

In the same collection (pp. 255-300) is an exhaustive study by M. SAN NICOLÒ, *Zur Vereinsgerichtsbarkeit im hellenistischen Aegypten*, the interest of which is mainly juristic.

M. ROSTOVTZEFF has published two articles, practically repeating and expanding parts of his *Economic History*; one, on *The Problem of the Origin of Serfdom in the Roman Empire*, in *Journal of Land and Public Utility Economics*, 1926, 198-207; the other, on *Les classes rurales et les classes citadines dans le haut empire romain*, in *Mélanges d'histoire offerts à Henri Pirenne*, 419-34.

The third edition by F. OERTEL of PÖHLMANN'S *Geschichte der sozialen Frage* is reviewed by J. HASEBROEK in *Gnomon*, 1927, 257-66, by V. EHRENBERG in *Hist. Zeits.*, 135, 1927, 444-6, and by W. ENSSLIN in *Phil. Woch.*, XLVII (1927), 775-84 and 803-9.

In *A Ptolemaic Holiday* W. M. FLINDERS PETRIE reconstructs the story of the documents published by BELL (see § 3) (*Ancient Egypt*, 1927, 75-6).

G. SEURE, *Touristes anciens aux tombeaux des rois* (*Journ. des Sav.*, 1927, 168-78, 262-71, 307-18) and *Les impromptus touristiques aux tombeaux des rois* (*Rev. ét. anc.*, XXIX, 1927, 341-76) deals with the graffiti published by BAILLET.

The bibliography in *Aegyptus* (6561, p. 233) mentions a dissertation by K. FR. W. SCHMIDT, *Das griechische Gymnasium in Aegypten*, Halle, 1926.

Reference may be made here to an article belonging also to § 2, E. BICKERMANN, *Ritualmord und Eselskult*, in *Monatsschr. f. Gesch. u. Wiss. d. Judentums*, LXXI (1927), 171-264.

Education, Science, and Art. R. W. SLOLEY describes the Groma: *An Ancient Surveying Instrument*, in *Ancient Egypt*, 1926, 65-7.

K. RONCZEWSKI, *Description des chapiteaux corinthiens et variés du Musée d'Alexandrie (Égypte)* (pp. 36, 8 pls. and 29 figs.) is published as a supplement to fasc. 22 of *Bull. Soc. Arch. Alex.*, 1927, and reviewed by R. L. in *Rev. Arch.*, XXV (1927), 401.

Alexandrian Art is briefly and inadequately mentioned in A. W. LAWRENCE'S *Later Greek Sculpture* (London, Cape, 1927. Pp. xvii+158, 112 plates): the book is reviewed by R. H. in *J.H.S.*, XLVII (1927), 271-2.

O. M. DALTON'S *East Christian Art* has been reviewed at length by CHARLES DIEHL in *Byz. Z.*, XXI (1926), 127-133. DIEHL has himself just published a book on *L'art chrétien primitif et l'art byzantin*. Van Oest, Paris and Brussels, 1928. Pp. 61+Table des matières+64 plates.

Finance, Agriculture, Industry. V. MARTIN'S *La fiscalité romaine* (see *Journal*, XIII, 112) is reviewed by P. C. in *Rev. de Phil.*, ser. 3, I (1927), 272-3 and by J. G. MILNE in *Journal*, XIII, 276.

A dissertation (Jena, 1923, unprinted) by O. GRABE on *Die Preisrevolution im 4. Jahrhundert n. Chr. und ihre Ursachen, nachgewiesen an Aegypten*, is mentioned in B.G.U., VII, 139.

M. SCHNEBEL'S *Landwirtschaft* is reviewed by M. ROSTOVTZEFF in *Classical Weekly*, May 2, 1927, and by W. SCHUBART in *Or. Lit.-Z.*, XXX (1927), 163-4.

The second part of CH. DUBOIS, *L'olivier et l'huile d'olive dans l'ancienne Égypte*, dealing with the Roman period, appears in *Rev. de phil.*, ser. 3, I (1927), 7-49 (see *Journal*, XIII, 112 on first part).

The British Museum *Guide to an Exhibition of Manuscripts and printed books illustrating the history of Agriculture* (1927, pp. 30, 8 plates) includes descriptions of and notes on nineteen papyri, some of them unpublished, relating to Egyptian agriculture in the Graeco-Roman period.

J. VOGT reviews RICCI'S *Coltura della Vite* (see *Journal*, XI, 102), in *Or. Lit.-Z.*, XXX (1927), 676-7.

W. L. WESTERMANN uses the Zeno papyri to illustrate the conditions of agricultural labour under Philadelphus, with special reference to the rate of wages. *Egyptian Agricultural Labor under Ptolemy Philadelphus* in *Agricultural History*, I, No. 2 (1927), 34-47.

A. W. PERSSON'S *Staat und Manufaktur* (see *Journal*, XIII, 112-13) is reviewed by M. P. CHARLESWORTH in *Class Rev.*, XLI (1927), 152.

In the bibliography of *Journ. des Sav.* is mentioned A. JARDÉ, *Les céréales dans l'Antiquité* (*Bibl. des Ét. fr. d'Athènes et de Rome*, fasc. 130). Paris: de Boccard, 1926. Pp. xvi+240.

Numismatics and Metrology. A. SEGRÈ has published a comprehensive work on ancient metrology, a considerable part of which is taken up with facts and figures derived from Egypt: he seems to have missed very little that comes within his purview, and the book will be of great service to students for purposes of reference. *Metrologia e circolazione monetaria degli antichi*. Bologna, Nicola Zanichelli, 1928 (published 1927). Pp. xiv+546. Incorporated in this are several articles which have previously been noticed in this bibliography, and one more recent, *Note di metrologia Greco-Egizia* in *Studi Ital. di Fil. Class.*, N.S. v, 93-110.

E. S. G. ROBINSON'S volume on the Cyrenaic coins in the British Museum is important from the point of view of Ptolemaic numismatics, and the exhaustive introduction contains much valuable information in relation to the history of Egypt. *Catalogue of the Greek coins of Cyrenaica*. London, British Museum, 1927. Pp. cclxxv + 154, 47 plates. Reviewed by J. G. MILNE in *Class. Rev.*, xli (1927), 233-4.

G. F. HILL publishes a gold octodrachm of Ptolemy III in the British Museum. *Brit. Mus. Quarterly*, I, 70: also in *Greek coins acquired by the British Museum in 1926*, in *Nym. Chron.*, vii (1927), 208.

P. COUÏSSIN, in an article on *Les armes gauloises figurées sur les monuments grecs, étrusques, et romains* (*Rev. Arch.*, xxv, 1927, 138-176), refers to a tetradrachm of "Ptolemy Soter," which provoked a note from TH. REINACH pointing out that a large class of coins with the symbol of a Galatian buckler exists, belonging to Philadelphus. *Rev. Arch.*, xxvi (1927), 184-5.

J. G. MILNE discusses *The Alexandrian coinage of Augustus* in *Journal*, xiii (1927), 135-40.

L. LAFFRANCHI refers to the Alexandrian numismatic evidence on p. 117 in a paper entitled *Die Daten der Reisen des Kaisers Hadrian*. *Nym. Zeit.*, xix (1926), 113-18.

H. MATTINGLY quotes the letter published in MEYER, *Jur. Pap.*, 249, 73 note, and points out its bearing on the circulation of Egypt at the end of the third century A.D. *Sestertius and denarius under Aurelian* in *Nym. Chron.*, vii (1927), 224-6.

A review by J. VOGT of MAX BERNHARD'S *Handbuch zur Münzkunde d. rom. Kaiserzeit* should be noticed. *Gnomon*, 1927, 55-8.

ARTURO ANZANI has in preparation a Corpus of Axumite coins, which are of interest to the student of Roman Egypt: a preliminary article has appeared. *Nymismatica Axumita* in *Riv. Ital. Num.*, III, ser. 3 (1926), 5-110. There are also some remarks on Axumite coins in G. F. HILL'S *Greek coins acquired by the British Museum in 1925* in *Nym. Chron.*, vi (1926), 134-6.

J. G. MILNE.

N. H. BAYNES.

6. LAW.

A. General.

i. *Bibliographies*. The most complete bibliography is that of E. PERROT, *Rev. hist. dr. fr. et étr.*, N.S., v (1926), 8*-25*. In that of H. LÉVY-BRUHL, *Rev. hist.*, cliv (1927), 231-6, there is little that concerns us. In *Z. Sav.-St.*, xlvii (1927), 513-79, W. KUNKEL continues from previous volumes the review of Italian legal literature, 1915-22, and *ibid.*, 586-94, he contributes an impressive bibliography of J. PARTSCH, to whom V. ARANGIO-RUIZ devotes a *Necrologio* in *Bull. Ist. Dir. Rom.*, xxxv (1927), 227-37. Less relevant here is the bibliography of PAUL KRUGER by FRITZ SCHULZ in the same number of the *Z. Sav.-St.*, xxxiii-ix.

ii. *Lexicographical*. EGON WEISS, *Z. f. vgl. Rechtsw.*, xlii (1926), 291-3, warmly welcomes M. SAN NICOLÒ'S Greek part of the *Vocabularium Cod. Just. Journal*, xiii, 113). It confirms the continuity of Greek legal terminology and also contributes to the solution of the basic problem of Roman law, namely its re-thinking into Greek during the fourth and fifth centuries. It is no merely mechanical index: thus the proper Latin term is often supplied (see νόμος πολιτικός, έγγνή, άγωγή).

In *Bull. Ist. Dir. Rom.*, xxxv (1927), 177-89, O. GRADENWITZ illustrates the utility of PREISIGKE'S *Wörterbuch* by deriving from it rectifications of B.G.U. 613, 14 and 41-2, B.G.U. 592, 11-16, P. Amh. 67 and B.G.U. 361. Interesting suggestions are made for the further organisation of papyrology. Again in *Archiv*, viii, 250, the same writer argues in favour of his own completion of B.G.U. 388, II, 38: ταῖς ἀλ[ηθεί]αις against L. MITTEIS'S (*Chrest.*, p. 109): ταῖς ἀλ[ηθιν]αῖς, using the data of the index to Justinian's Novels which is being prepared at Munich. And lastly, reviewing ARANGIO-RUIZ and OLIVIERI'S *Inscriptiones Graecae Siciliae et Infimae Italiae* (Milan, 1925), in *Z. Sav.-St.*, xlvii (1927), 490-502, O. GRADENWITZ elucidates ἀμπώλημα, a ἀπαξ λεγόμενον which occurs on the recto of *Tub. Heracl.* I, 109, with the help of the new LIDDELL and SCOTT s.v. ἀναπαλείν.

iii. *New texts*. New publications of papyri are catalogued above in § 3, and some individual documents from them are mentioned incidentally in the course of the present section. Special interest attaches to P. Oxy. xvii on account of its inclusion (2103) of fragments of a third-century papyrus showing portions of the text of Gaius, *Inst.* iv. Fr. 1 gives a few words of s. 57; frs. 2 and 3 cover from the middle of s. 68 to the middle of s. 72a, thus coinciding at the end with an illegible page of the Veronese palimpsest. Unfortunately they break off just where we can now see that information as to the formula of the *actio de peculio et de in rem verso*, suppressed by Just., *Inst.* iv, 7, was given by Gaius. Hence the new part is

perhaps less important than the second copy now available of the earlier sections, for this greatly discredits the view of certain modern writers that the Veronese Gaius contains material additions by post-Gaians. Even in this matter we might have been more fortunate, since the sections found do not appear to have been specifically attacked in any serious point. No. 2089 is another juristic fragment, in a fourth-century hand, dealing, so far as its mutilated state allows one to speak, with legacies: joint legacies *per vind.* and a wife's right to take under the will of her husband. See further under G, below.

iv. *Miscellaneous reviews.* L. WENGER'S *Der heutige Stand der römischen Rechtswissenschaft* is reviewed below, p. 186.

In *Z. f. vgl. Rechtsw.*, XLII (1926), 289-91, PER. BISOUKIDES notices shortly the inaugural lecture of the first holder of the chair of Greek Legal History at Athens, a lecture which included in its survey the influence of Egyptian on Greek law: P. S. PHOTIADES, *Εισιτήριοις λόγος*, *Yearbook of the Athenian Law Faculty*, 1925.

In *Aegyptus*, VII (1926), 154-63, V. ARANGIO-RUIZ reviews *Raccolta Lombroso* (*Journal*, XIII, 115), especially the legal contributions: P. DE FRANCISCI on P.S.I. 55, contesting P. COLLINET'S thesis that it is pre-Justinian; S. SOLAZZI, who maintains that P. RyI. 117 is not a degenerate *in iure cessio*, but a *cessio bonorum*; B. BRUGI referring P. Stud. 22, 131 to *dominium infectum*; L. WENGER on the P. Oxy. XVI procedural documents; and F. MAROI on *Expositi* (see below, B, v).

In an appreciative, but cautious, review of P. COLLINET'S *Histoire de l'école de Beyrouth* (Paris, 1925), PRINGHEIM (*Z. Soc.-St.*, XLVII, 1927, 463-9) supports the author's opinion, controverted by P. DE FRANCISCI, as to the age of P.S.I. 55.

v. *The written instrument.* A. SEGRÈ continues his studies *Journal*, XIII, 114; add *Nota a P.S.I. 906* by G. FLORE, *Aegyptus*, VII, 1926, 271-4) with two articles in *Bull. Ist. Dir. Rom.*, xxxv (1927). The first (61-8), *I documenti agoranomici in Egitto nell'età imperiale*, deals mainly with a feature of the Oxyrhynchite documents, namely the preliminary proceedings before a private notary *ἐν ἀγορῇ*. The *agoranomus* might adopt the document drawn *ἐν ἀγορῇ* either by superseding it by a proper agoranomic document or by allowing an *ἐκμαρτύρησις* of it before himself. The first case presents no difficulty, but in the second where do we get the *ἐπίσταλμα* of the *βιβλιοθήκη ἐγκτήσεων* required for the effect *in rem* of contracts of sale or hypothecation? SEGRÈ thinks that the presentation to the *agoranomus* of the document drawn *ἐν ἀγορῇ* was accompanied by a request for *ἐπίσταλμα*. Though the forms in which the *agoranomus* communicated to the *βιβλιοθήκη* and the *ἐγκυκλίον* are not known, the control of the latter is proved by P. Oxy. 241-3: 327-40.

SEGRÈ'S second article (69-104), *Note sulla forma del documento greco-romano*, deals with the convergence of the Greek and Roman forms to a uniform type, the Byzantine tabellionary instrument, a much wider subject, less successfully presented. The first section traces the decay of the objective double *syngraphē* and its replacement by subscribed duplicate documents, one copy being deposited in a public archive: illustrated from the Delphic manumissions. The second section, on the imperial period, makes more use of papyri. Even before the *Const. Antoniniana* the Roman chirograph, with *scriptura interior* and *exterior* is diplomatically very close to the Greek. SEGRÈ'S explanation of the regulation of this form by a *SC.* of Nero (Paul *Senf.* 5, 25, 6) should be noted (p. 80). But from the third century the Roman chirograph was absorbed by the Greek. In epistolary form it underwent little change till the fourth century (section 3), when begins the evolution towards the tabellionary instrument. This is considered chiefly in light of the papyri, subject to the reservation that the evolution there is rather special. There appears to be a misunderstanding (p. 100) of C. 4, 21, 17, 1. SEGRÈ ends with an account of the nomicus Dioscorus of Antmoupolis (P. Lond. v) and an appendix on the *tabelliones* of Byzantine papyri (pp. 102-4).

Die antiken Grundlagen der frühmittelalterlichen Privaturkunde (Teubner, 1927), by H. STEINACKER, I have only seen enough of to note the title of section 10: *Das grieko-ägyptische Urkundenwesen* (28-45). Neither SEGRÈ nor STEINACKER could take account of P. Oxy. XVII, 2131, showing the survival as late as A. D. 207 of the old double document.

In *Μνημοσύνη*, LV (1927), 187-238, J. C. NABER goes on with his *Observationum ad papyros iuridicas*, the subject being the official entries on documents known as *πρόματα* and *χαράγματα*. The present article continues the latter topic and more is to follow. § 15, after discussing the exact significance of *χρηματίζων* and *συχρηματίζων*, deals with the offices connected with the census. § 16 treats of *ἐπίσταλμα*, *προσαγγελία*, the nature of the official examination of title, the moment when civil title passed, *παράθεσις* and *μετεπιγραφή*. § 17 considers various offices connected with the validation of instruments, and § 18 the exact purpose and effect of *δημοσίωσις*. The article ends with a rich *elenchus fontium* for §§ 11-18.

B. *Law of persons.*

i. *Corporations.* To Ἐπιτύμβιον *Heinrich Swoboda dargebracht* (Reichenberg, 1927) M. SAN NICOLÒ contributes (pp. 255-300) an article on the internal jurisdiction exercised by corporations in Ptolemaic times: *Zur Vereinsgerichtsbarkeit im hellenistischen Ägypten*. The material, chiefly demotic and confined to religious corporations, is eked out by Greek analogies. Successive sections treat of the constitution of the corporate courts, their competence, offences dealt with, penalties inflicted, procedure up to judgement and execution. For Roman corporations the question is too complex to admit of a simple solution, but in Greece and Egypt the corporate statutes formed a sort of contract between the members, so that the jurisdiction was in essence arbitral. Within the law the state recognized corporate autonomy. Greek law sanctioned distress for execution of arbitral decisions, and resistance would, at Athens, ground the *δίκη ἐξούλης*. The Egyptian evidence is defective, but corporate statutes contain a clause which, J. PARTSCH has shown, corresponds to the *καθάπερ ἐκ δίκης* clause of later contracts.

P. W. DUFF's *The charitable foundations of Byzantium*, in *Cambridge Legal Essays*, 71-82 (Heffer, Cambridge, 1926), contains a good account of the statute law of the earlier Byzantine period, but hardly uses the papyrological materials.

ii. *Status libertatis.* Important corrections of P. Freib. 10, published by J. PARTSCH, *Stzgsber. Heidelberger Ak.*, 1916, 35 ff. (= P. MEYER, *Juristische Papyri*, no. 7: cf. J. PARTSCH, P. Strassb. II, 112, 11) are given by U. WILCKEN in his Appendix (105-7) to J. PARTSCH'S P. Freib. III (1927; see above, § 3).

iii. *Status civitatis.* E. BICKERMANN, *Archiv*, VIII, 216-39: *Der Heimatsvermerk und die staatsrechtliche Stellung der Hellenen im ptolemäischen Ägypten*, is an important study of the light thrown on the legal position of Greeks in Ptolemaic Egypt by the "home-styles" appended to their names. The home-style was for the natives a Greek innovation: a Greek is *Διονύσιος Διονυσίου Μακεδών*, a native is *Ξενόστis Ἀρείου τῶν ἀπὸ Θίως*. So we have two forms, an ethnic and a local, corresponding to the two classes of the population recognized by Euergetes II, *viz.* Greeks (including immigrants generally) and natives. The ethnic style, showing a foreign *πατρίς*, was preserved by the descendants of immigrants, but with a growing inexactitude which indicates the legal unimportance of exactitude. From the legal point of view Macedonian, Cretan, Athenian, were simply Hellenes, and this shows that the doctrine of personality of law, alleged but unproved for Greece, never applied to Greeks in Egypt. They were foreigners subject to the common, *i.e.* royal, law, and their imagined personal law was not even subsidiary. Such privilege as the Greek had was due to office, not to race; that is why the ethnic style is regularly accompanied by mention of office, except with *τῆς ἐπιγονῆς*, which of itself implies office. Later the Greeks began to add to their own ethnic style the local style which they had invented for the natives. The native is *ὁ δέινα τῶν ἀπὸ*, the Greek *Ἑλληγν τῶν ἀπὸ*. This shows the gradual absorption of the Greeks into the native population owing to the absence of racial privilege, so that, as Livy says: *Macedonum in Aegyptiis degenerarunt*, and the style adopted by the Roman census for the *χώρα* is universally *ὁ δέινα τῶν ἀπὸ*.

The unexpected turn given by E. BICKERMANN to the controversy between P. MEYER and G. SEGRÈ on the interpretation of P. Giessen 40, I (*Journal*, XIII, 114-15) has occasioned articles by A. SEGRÈ and G. DE SANCTIS in *Ric. di Fil.*, LIV, N.S. IV (1926), 471-87 and 488-500. A. SEGRÈ accepts BICKERMANN'S contention that the restoration *πολιτευσμάτων* in l. 9 is palaeographically impossible, but not the rest of his position, namely that we have here not the *Const. Ant.*, but a supplementary edict of 213. For him the only question is of the exact extent of population covered by the exception of *deditivi* in l. 9. Here he comes near to BICKERMANN, holding that what is meant is not the mass of the peasantry, the *λαογραφούμενοι* in Egypt, the *capite censi* elsewhere (P. MEYER'S view), but only barbarians who, having surrendered at discretion, had been incorporated in the army or been settled within the empire. G. DE SANCTIS, on the other hand, accepts substantially BICKERMANN'S whole position, adding that the *Const. Ant.*, even condensed, must have been too long for our papyrus. The strongest objection made by A. SEGRÈ is in the matter of date. If we move the date of P. Giessen 40, I to late 213, how comes it to be followed by a second constitution of 212 and that by a third of 215? DE SANCTIS therefore revises BICKERMANN'S chronology: the defective preamble refers to the Geta episode, and if the word *νίκη* in l. 4 is unsuitable, it is after all only a conjecture. The same word in l. 10 refers, he holds, perhaps to no specific event, but to hopes for the coming German campaign. In conclusion he observes that BICKERMANN'S interpretation squares with the policy of the Severi, with Caracalla's militarism and with ROSTOVITZEFF'S general conception of imperial history.

J. VOGT, reviewing BICKERMANN'S thesis in *Gnomon*, III (1927), 328-34, pronounces against its positive side, and controverts its arguments more directly than A. SEGRÈ. Thus he denies that the religious

motives alleged in the preamble are incompatible with the *Const. Ant.*, and he defends the view that the *vίκη* of l. 10 is the Geta episode; against the enigmatic words of l. 6: [δό]άκις ἐὰν ἰ[π]εισέλεθ[ωσ]εν εἰς τοὺς ἐμοὺς ἀν[θρ]ώπους, which form BICKERMANN'S strongest argument, he sets the generality of the phrase [κατὰ τ]ὴν οἰκουμένην. But on the exception of *dediticii* in l. 9 he fully accepts BICKERMANN'S criticism of the usual view, which is much too wide, especially if *dediticii* is taken, as in a constitution it must be, in its strict legal sense. In that sense the Greeks in Egypt were *dediticii* too. The exception must be taken, as G. SEGRÈ said, with the words immediately preceding it, though what those words may be is now quite uncertain. Thus there was no exception of *dediticii* in the *Const. Ant.*, though some exceptions were left to be implied by the general principles of Roman law, and that is why our literary tradition of the *Const. Ant.* says nothing about them.

In *Rev. hist.*, CLV (1927), 403-4, CH. LÉCRIVAIN regards BICKERMANN as having established the universality of the *Const. Ant.*, but is not satisfied with the corollary that Caracalla in the present supplementary edict excluded a class of soldiers.

An even more radical view than BICKERMANN'S is adopted by R. LAQUEUR: *Das erste Edikt Caracallas auf dem Papyrus Gissensis 40* (*Nachr. d. Giessener Hochschulgesellschaft*, VI, 1927, 15-28). The text has nothing at all to do with the *Const. Ant.*, for the motives in the preamble have, according to Roman ideas, no possible connection with an extension of the *civitas*. It is un-Roman to imagine that the glory of the gods is increased by an extension of their worshippers, and, for that matter, *civēs* were not necessarily of the state cult (Jews), and non-citizens were not exempt from duty to the state gods. He holds then that the clause of l. 6: [δό]άκις ἐὰν ἰ[π]εισέλεθ[ωσ]εν εἰς τοὺς ἐμοὺς ἀν[θρ]ώπους, refers to the infiltration of non-Roman cults, and that what the emperor proposes to do in gratitude is to endow them with official recognition and to abolish the police measures (*αἰτίας* l. 2) against their exercise. This position is very attractively supported in the body of the article, but we must not forget that even before the discovery of the papyrus a connection between the extension of *civitas* and that of the state cults had been observed (U. WILCKEN, *Archiv*, v, 1913, 428). And it remains for LAQUEUR to make what he can of the rest of the papyrus. He does this with great ingenuity, but all depends on his assertion that the τ of the supposed π[ολιτ]είαν in l. 8 is irreconcilable with the remains before εἰαν. Till this is admitted, his whole hypothesis must be rejected.

iv. *Marriage*. E. CURQ'S article mentioned below (G) deals with an application of the Egyptian law of dowry to international relations. In *O.L.Z.*, xxx (1927), 217-21, M. SAN NICOLÒ'S *Vorderasiatisches Rechtsgut in den ägyptischen Eheverträgen der Perserzeit* traces into Egypt an old Babylonian procedure for divorce initiated by a formal declaration of "hatred": this, in contrast to Jewish law, is made more frequently in our examples by the wife than by the husband. The fifth century Aramaic papyri of Elephantine show the Semitic colonists following the Babylonian version of the custom, and the technical word for "hatred" recurs between the Persian conquest and Alexander in each of the four demotic papyri dealing with marriage. In Ptolemaic times the technical word is not so generally used, and only by the husband. It occurs neither in the pre-Persian hieratic documents nor in the Greek Ptolemaic papyri, though in the latter we have similar expressions. It follows that the technical "hatred" was an orientalism introduced by the Persians and expelled by Greek influence, and it is to Persian influence that we should attribute the independence of the Egyptian wife, including her right to divorce. In demotic papyri of the later Ptolemies we find the wife owning separate property, and against L. MITTEIS (*Grundz.*, 211) P. Lonsdorfer I (363 B.C.) shows this feature before the times of Greek influence: it has its origin in Further Asia, where the constitution of a wife's separate property is seen as early as the Hamurabi dynasty.

Important new illustration of the adaptation of the Greek marriage in Egypt is furnished by P. Freib. III, 29-31 (§ 3 above). According to J. PARTSCH'S brilliant introduction they form a bridge between the primitive Greek document seen in P. Elephantine 1 and the hellenistic P. Tebt. 104 (end of second century B.C.). In his appendix (p. 60) U. WILCKEN accepts and reinforces PARTSCH'S general conclusion that we have in the present documents Greek marriage contracts which, under the influence of native law, create a free marriage, to be followed by a full marriage: distinction between *ὁμολογία γάμου* and *συγγραφὴ συνοικισίου*, which reappears 150 years later in the Alexandrian *συγχωρήσεις* of B.G.U. IV, 1050 ff.

v. *Status familiae*. In Ptolemaic times soldiers despatched on duty enjoyed, as did their wives and children (*οἱ ἐν ἀποσκευῇ*), privileges which recall the medieval *privilegium crucis*. These are studied by E. KIESSLING, *Archiv*, VIII, 240-9: *Aposkeuai und der prozessrechtliche Stellung der Ehefrauen im ptolemaischen Ägypten*. He contributes to the more exact interpretation of P. Hal. I, 124-56, with the help of

P. Bad. IV, 48, but his chief thesis, against SEMEKA, *Ptolem. Prozessrecht*, 225, is that the wife of an absent soldier would neither have been specially protected against being sued, nor in certain cases have been secured a right to sue, unless in general a wife would have been in these matters under the tutelary oversight of her husband. He thinks that the argument may be extended to Egyptians as well as to Greeks.

Taking as his text F. MARO's article on *Expositi* (above, A iv), P. FOURNIER draws a gruesome picture of this ancient form of Malthusianism, showing how moderate and indirect the legislation even of a Constantine had to be in the face of so inveterate a practice. The article does not deal *ex professo* with papyrological material: *À propos des expositi*, *Rev. hist. dr. fr. et étr.*, N.S. v (1926), 302-8.

ALBERTONI, *La apokeuxis. Contributo alla storia della famiglia*, so cited *Bull. Ist. Dir. Rom.*, xxxv (1927), 247, I have not seen.

C. Property.

The only topic to be mentioned under this head is the system of publicity applied to the transfer of interests in land. Discussion has mostly taken the form of reviews of the recent works of J. PARTSCH, E. SCHONBAUER and FRIEDR. VON WOESS (*Journal*, XI, 99; XIII, 116. See P. MEYER's *Bericht*, *Z. Sav.-St.*, XLVI, 1926, 323, 333). There is however in *Aegyptus*, VIII (1927), 43-88, a substantive article by G. FLORE: *Sulla βιβλιοθήκη τῶν ἐγκτήσεων*, and current literature has not yet had time to take account of U. WILCKEN's new edition of P. Freib. III, 36-7 (above, § 3), with an important commentary. There is also B.G.U. VII, 1573, published at the end of 1926, to be reckoned with. This considerably mutilated text of A.D. 141-2 contains the official documents relating to an ἐμβαδεία up to an advanced stage of the process. It shows several novelties in detail, but the general scheme, as outlined by A. B. SCHWARZ (*Hypothek und Hypallagma*, 111 etc.) and L. MITTEIS (*Grundz.*, 161) on the strength of P. Flor. 56, is confirmed. P. Oxy. XVII, 2134 furnishes a fresh illustration of an application by a creditor for the registration at Alexandria of a secured loan (*ca.* A.D. 170).

G. FLORE's article agrees in principle with E. SCHONBAUER in depreciating the Ptolemaic publicity system, maintaining that it was the Romans who realized the legislative ideal, by creating in the βιβλιοθήκη ἐγκτήσεων a central office for the collection of deeds, to which notaries and parties could appeal with confidence. After examining the Edict of Mettius Rufus, P. Oxy. 237, he has sections on κατοχαί (impediments to ἐπίσταλα), ἀπογραφή (notification to parties of the perfection of the contract; also inscription of the property in the διασπρώματα), παράθεσις (marginal entry), and the special registers of catocic land. He concludes that the function of the βιβλιοθήκη was not that of a registry of title or of deeds, but simply the prevention of frauds by publicity given to the transmission of real rights.

In *Z. f. vgl. Rechtsw.*, XLII (1926), 301-2, M. SAN NICOLÒ gives a very short and rather unfavourable review of E. SCHÖNBAUER's *Beitr. z. Gesch. d. Liegenschaftsrechtes* (*Journal*, XIII, 116). The same work is reviewed at greater length, along with J. PARTSCH's *Die griech. Publizität der Grundstücksverträge im Ptolemäerrecht* (*Festschr. f. Lenel*, Freiburg, 1921), by W. KUNKEL in *Gnomon*, III (1927), 145-65. He considers that the chief service rendered by PARTSCH is the linking up of ancient Greek practice through the Ptolemaic with the imperial Roman, and that it is in the field of Greek law that he is supreme. In the Ptolemaic field he is less successful than SCHONBAUER. On the question of the βιβλιοθήκη ἐγκτήσεων he finds substantial agreement between SCHÖNBAUER and FRIEDR. VON WOESS, in spite of the difference of their methods. In the detail of the Ptolemaic period he is against PARTSCH's view of ἀναγραφή, but, though agreeing with SCHÖNBAUER's doctrine of καταγραφή, he thinks that his restoration of P. Hal. I, 245 is unproven. On the Roman period he holds that SCHÖNBAUER is successful in showing the continuance of the Ptolemaic καταγραφή as the constitutive act, but dissents from his hypothesis as to the origin of the βιβλιοθήκη. He also accepts SCHONBAUER's doctrine (against A. B. SCHWARZ's) that δημόσιος χρηματισμός was necessary to the validity of dealings with land, and he regards his theory of *hypotheca* as tempting, but not proven.

To complete the picture, there is a review of FRIEDR. VON WOESS's *Untersuchungen über das Urkundenwesen und den Publizitätsschutz im römischen Ägypten* (Munich, 1924) by P. KOSCHAKER in *O.L.Z.*, XXIX (1926), 737-9. The central question is of the βιβλιοθήκη ἐγκτ., which was set up at the beginning of the empire in the districts of Egypt for the purposes of private dealings in land. L. MITTEIS thought that inscription there was necessary for effect as against third parties, not *inter partes*. WOESS holds that it was not a registry of title, but rather a supervisory office, collecting the notarial deeds of its district and serving, besides fiscal and other purposes, to systematise the examination of the titles of aliens of

land and slaves. KOSCHAKER agrees in principle, and accepts the contention that the decisive moment for the acquisition of property was the entry of the conveyance in the notary's register of contracts, not registration in the βιβλιοθήκη.

See also above, A v.

D. *Obligations.*

i. *Compromise.* To the *Rev. d'hist. du dr. (Tijdschrift voor Rechtsgeschiedenis)*, N.S. VII, 1927, 432-45, A. ARTHUR SCHILLER contributes *A Coptic Dialysis*, a translation with commentary of CRUM and STEINDORFF's *Koptische Rechtsurkunden* 38, being a settlement of an inheritance by agreement.

ii. *Lease.* Fresh Ptolemaic leases will be found in P. Freib. III, 21-5.

V. ARANGIO-RUIZ finds in P. Oxy. XVI, which he reviews in *Riv. di Fil.*, LIV, N.S. IV (1926), 96-9, confirmation of the importance in agricultural Egypt from the fifth century onwards of leases at the will of the lessor. As he observes, the lessees at will form an intermediate class between the upper class *emphyteutic* and the *coloni adscripticii*, being free in status, but in clear economic dependence on the lessors. That such holdings were, however, stable, he neatly deduces from P. Oxy. XVI, 1965, 14, where he rightly rejects the editors' emendation. The *Rev. hist. dr. fr. et étr.*, N.S. v (1926), 604-5, summarises an address by F. MARTROYE on the connected subject of the earliest legislation against patronage in which Egypt is prominent, though the short report cites no papyri.

In the volume dedicated to SWOBODA (325-35, above B i), EGON WEISS under the title 'Ιερά Συγγραφή studies from the juristic side a Delian inscription published in full by ZIEBARTH (*Hermes*, LXI, 87). It is a *lex locationis* of temple land offered under the Athenian administration of Delos, which began in 166 B.C. Some papyrological parallels are adduced.

iii. *Sale.* Mentioned in *Rev. hist. dr. fr. et étr.*, N.S. v (1926), 152, is a Paris thesis by E. POPESCO: *La fonction pénitentielle des arrhes dans la vente sous Justinien*; much the same subject was expounded by G. CORNIL in an address reported *ibid.*, 585-7.

P. Oxy. XVII, 2136 of A.D. 291 should be noted: a sale of a boat is put in the form of a lease for 50 years (μίσθωσις). The explanation must be, as the editor says, some special advantage attaching to the nominal ownership of a boat.

iv. *Guarantee. Coûtournement mutuel et solidarité (Mélanges Cornil, I, 157-80)*, by E. CUG, treats of ἀλληλεγγύη, a form of obligation which first appears late in the Ptolemaic period. CUG holds that it came from Mesopotamia, having at first only the effect which it had in its birthplace, namely to guarantee the creditor against the absence of one of the debtors, not against his insolvency. That last risk would be met either by a special clause or by the guarantee of a third party. But in the long run ἀλληλεγγύη came to be employed in Egyptian practice to set up Roman solidarity. The difficult *responsum* of Papinian, D. 45. 2, 11 pr., is in point, also Nov. 99, which CUG explains as an attempt to reduce ἀλληλεγγύη to its original function.

E. *Inheritance.*

The *Rev. hist. dr. fr. et étr.*, N.S. VI (1927), 589-91, reports an address by J. PIRENNE: *quelques observations sur le régime des successions dans l'ancienne Égypte*. Denying the alleged matriarchal character of even the earliest known Egyptian law of succession, PIRENNE discerns in its evolution from Dyn. II to Dyn. XXV an oscillation between individualism, understood in the sense of division amongst children, females included, and feudalism, the tendency of which is to keep property undivided in the hands of the eldest male.

B.G.U. VII contains several documents concerning succession in the second century of our era. 1662, A.D. 182, is an acknowledgement of payment of one silver talent on account of a legacy in a Roman will. The tablets from which 1695 has been composed show so small a part of the Latin will, A.D. 157, of a *miles classis Augustae Alexandrinae* that nothing much can be derived from it, and 1696, also composed of fragmentary tablets, only affords some parallels from a Latin will of the second century with that of DASUMIUS. 1655, more complete, gives the Greek version, taken A.D. 169 at its opening, of a will which provokes comparison with that of C. Longinus Castor. The influence of the Latin original, compulsory at this date, is plain. Our text begins with legacies (δίδωμι καταλείπω). In ll. 19-33 and at the end are noteworthy provisions for the testator's funeral, and the *mancipatio familiae* shows the fictitious price as *σηπτεριάν νούμων χειλιών* instead of σ. ν. ενός. This is probably due to a faulty expansion of the numeral ā, and an explanation is thus suggested of P. Hamb. 73, 14. The end of the minutes does not name the witnesses. The opening took place in the Caesareum of the κόμη Φιλαδέλφεια, the first mention of such an institution in a village.

F. *Procedure.*

Last year (*Journal*, XIII, 116) a considerable literature concerning P. Oxy. XVI, 1876 81 (early libellary procedure) was noted: P. COLLINET, *Rev. hist. dr. fr. et étr.*, N.S. III (1924), 720-5; L. WENGER, *Raccolta Lumbroso*, 325-34 and *Zivilprozess*, 263, n. 14, 267, n. 26; A. STEINWENTER, *Festschr. f. Hanaušek*, 36-51; add P. MEYER, *Z. Sac.-St.*, XLVI (1926), 344-5. We have further a notice by V. ARANGIO-RUIZ, *Riv. di Fil.*, LIV, N.S. IV (1926), 92-6. The striking fact is that these documents show Justinian's libellary procedure in application a century before him. The editors suggest that the later and simpler procedure was first introduced for cases of debt (more exactly, money lent); COLLINET (723) observes that three of the cases point to special difficulty in carrying out the then normal *litis denuntiatio*; STEINWENTER (39) draws attention to C.T. 2, 4, 3 and 6 (A.D. 371 and 406), which create a class of case freed from the ordinary procedure, a class which includes debt on chirograph or simple *mutuum*. ARANGIO-RUIZ, however, denies the possibility of inferring a special character for our cases from these few and fragmentary documents. He points out that, though 1876-9 are only minutes of proceedings in court, in which the *libellus* is not recorded in full, still the generality with which the plaintiff's claim is stated makes it unlikely that the *libellus* itself, at this date, named the exact action brought. So far he agrees with COLLINET, but he rightly adds that we must not argue from pre-Justinian practice to the more romanized procedure of Justinian. In particular, he refuses to see in the very uncertain word *edantur* read at the end of 1877 a reference to the technical *editio actionis*: the reference is merely to the magistrate's order that the present minutes be communicated to defendant (so also STEINWENTER, 38). Defendant is put to his election, either to settle or to defend, and the alternatives are illustrated by 1880 and 1881. Editors and writers agree in noting that the defendant's *βιβλίον*, his *ἀντίρρησις* or *libellus contradictorius*, is a simple notification of intention to defend, not a pleading. STEINWENTER (45-6) has valuable remarks on the *cautio iuratoriæ* which accompanies the *ἀντίρρησις* of 1881—a forerunner of the *cautio iudicio sisti*—and on the effect of the settlement in 1880. He is inclined to regard the demand made in 1879, 7 in respect of *πεφενγότα πράγματα* as a demand for *missio in rem*.

The chapter on Ptolemaic procedure which one might expect to find in A. STEINWENTER'S *Die Streitbeendigung durch Urteil, Schiedsspruch und Vergleich nach griechischem Rechte* (*Journal*, XIII, 116) is, according to a laudatory review by M. SAN NICOLÒ in *Z. f. vgl. Rechtsw.*, XLIII (1927), 293-6, reserved for a future separate work, though the evidence of pre-Ptolemaic Egyptian procedure appears to be utilized in places.

G. *Public Law.*

The papyrus copy of the Edict of Tiberius Julius Alexander, published by U. WILCKEN in *Z. Sac.-St.*, XLII (1921), 124, is reproduced in B.G.U. VII, 1563. P. Oxy. XVII contains some documents of a similar class: 2104, a rescript of Severus Alexander; 2105, an edict of the prefect M. Petronius Honoratus of 147-8; 2106, a letter of an early fourth-century prefect. 2110 records proceedings of the Oxyrhynchite senate in 370.

In *Syria*, VIII (1927), 143-62, E. CUQ discusses *La condition juridique de la Coelé-Syrie au temps de Ptolémée V Épiphanée*. Antiochus, after reconquering this country, constituted it dowry for his daughter Cleopatra on her marriage with Ptolemy in 193-2. The problem of the consequent status of the country can be solved by taking this transaction seriously as constitution of dowry. There was no cession of territory to Egypt because by Egyptian law the wife's dowry did not become the property of the husband.

In the two volumes of PAULY-WISSOWA which appeared in 1927 (26, *Lodoroi-Lysimachides*, and 5, *Silacensis-Spursus*) I find nothing relevant except coll. 1490-3 of the article *Losung* (*κλήρωσις, sortitio*) signed EHRENBERG. Mention is made of the use of the lot in the attribution of liturgical offices and of compulsory leases and transport; also of its use for division of inheritances (H. KRELLER, *Erbrechtliche Untersuchungen*, 87 ff.). But this last was only a customary extra-legal usage. In fact, in the public life of Egypt *sortitio* played but a small part.

In a review of FRIEDR. VON WOESS'S *Asylwesen* (*Journal*, XIII, 116) FRIEDR. OERTEL, *Deutsche L.-Z.*, 1927, 1713-22, also sums up the intervening literature. He considers that WOESS has made many good points, especially the connection he has established between asylum and personal execution, but that he has gone wrong on others, notably the relation of "Church" and State. Nor has he proved that asylum is of ancient Egyptian origin.

La terreur de la magie au IV^e siècle, by JULES MAURICE, in *Rev. hist. dr. fr. et étr.*, N.S. VI (1927), 108-20, dealing with the legislation against and prosecutions for magic, may, though it does not mention papyri, be of service.

F. DE ZULUETA.

7. PALAEOGRAPHY AND DIPLOMATIC.

SCHUBART'S *Griechische Palaographie* has been reviewed by the following: P. MAAS (*O.L.Z.*, xxx, 1927, 938-9), W. WEINBERGER (*Phil. Woch.*, 1926, 1230-1), and G. ZERETELI (*Gnomon*, II, 1926, 482-90) who doubts some of his dates and has other criticism to offer on details of the work.

W. WEINBERGER contributes an article *Zur Griechische Tachygraphie* to *Phil. Woch.*, 1927, 733-6. This is a commentary on the article by MENTZ (*Die hellenistische Tachygraphie* in *Archiv*, VIII, 34-59), and deals chiefly with P. Berol. 5464 and the nine wax tablets at Halle recently deciphered (H. 1-9).

W. SCHUBART has written an article of a popular character—*Die Schönschrift altgriechischer Bücher*. This, although only an outline, makes an extremely lucid and concise introduction to the subject. He gives some very useful facsimiles. *Berliner Museen, Ber. u. d. preuss. Kunstsamml.*, XLVIII, 1927, 40-5.

F. BABINGER, in *O.L.Z.*, xxx (1927), 179-80, reviews GROHMANN'S *Allgemeine Einführung in die arabischen Papyri nebst Grundzügen der arabischen Diplomatie* (Wien, F. Zollner, 1924. Pp. iv + 108. 4to), which is reprinted from the *Corpus Papyrorum Raineri*. (I have not yet seen this.)

E. BETHE in a review of H. GERSTINGER'S *Die griechische Buchmalerei* (*Phil. Woch.*, 1927, 1005-10) discusses the use of illustration in papyrus rolls. He combats the suggestion that the illustration of literary texts was usual only in codices. He refers to an unpublished fragment of a Romance at Paris (*B. N. Suppl. gr.* 1294) illustrated with miniatures. Reference might have been made to the Johnson Botanical Papyrus and B.M. Pap. 113 in this connection. The former is rather fully discussed by C. SINGER (*J.H.S.*, XLVII, Pt. I, 1927) in an article on *The Herbal in Antiquity* (1-52).

A. CALDARA'S *I connotati personali* is reviewed by W. SCHUBART (*O.L.Z.*, xxx, 1927, 938-9) and J. HASEBROEK (*Gnomon*, 1927, 494-6). Both of these draw the comparison between the work in question and HASEBROEK'S own *Signalement*.

M. E. DICKER.

8. LEXICOGRAPHY AND GRAMMAR.

The second volume of F. PREISIGKE, *Wörterbuch der griechischen Papyrusurkunden*, has been completed by the publication of the third Lieferung (*συννοικεσία—ῶχρα*). The promised third volume will contain the lists of technical terms (names of officials, taxes, etc.) to which cross-references have been given in vols. I and II. Vol. I, Lief. 1, is reviewed by R. BULTMANN in *Theologische Lit.-Zeitung*, LI (1926), 491.

Part III of the new edition of *Liddell and Scott* (see *Journal*, XIII, 117) has appeared, bringing the work down to ἐξευτελιστής. Part II is reviewed by P. MAAS in *J.H.S.*, XLVII (1927), 154-6, and by W. SCHMID in *Phil. Woch.*, XLVIII (1927), 225-47.

Part VI of MOULTON AND MILLIGAN, *Vocabulary of the Greek Testament*, is reviewed by H. I. BELL in *Journal*, XIII (1927), 271-2.

E. MAYSER, *Grammatik der griechischen Papyri aus der Ptolemäerzeit*, II, 1, is reviewed in *Deutsche Literatur-Zeitung*, 1927, 1558-60, by W. SCHUBART, who praises the work but criticizes some details. MAYSER has sometimes classified sentences according to their German translation instead of according to their Greek content.

E. PREUSCHEN, *Griechisch-Deutsches Wörterbuch zu den Schriften des Neuen Testaments* (see *Journal*, XIII, 118) and L. RADERMACHER, *Neutestamentliche Grammatik* (2^e Aufl., Wien, 1925), are reviewed by H. D. ELEHAYE in *Anal. Bolland.*, XLIV (1926), 140-2. RADERMACHER'S book is reviewed at much greater length by A. DEBRUNNER in *G.G.A.*, 1926 (No. IV-VI), 129-52, who expresses dissatisfaction with it.

Latin words and names occurring in Greek papyri have been collected by B. MEINERSMANN, *Die lateinischen Wörter und Namen in den griechischen Papyri* (Papyrusinstitut d. Univ. Heidelberg, 1), Leipzig, 1927 (cf. *Journal*, XIII, 118).

An article by PAUL JOUON, *Quelques aramaismes sous-jacents au grec des évangiles* (*Rech. de Sc. rel.*, 1927, 210-29), though not papyrological, is worth mentioning here.

O. GRADENWITZ has shown (*Archiv*, VIII, 250), with the help of the unpublished Munich Index to the Novellae of Justinian, that *ταῖς ἀληθιναῖς* is the true restoration in B.G.U. 388, II, 38 ff., as this phrase is well attested and it is doubtful whether the formula *ταῖς ἀληθιναῖς* existed at all.

F. STIEBITZ points out (*Phil. Woch.*, XLVIII, 1927, 890) that ἐπιούσια in *Sammelbuch* 5224, 20, is the equivalent of *diaria*, which occurs in a very similar context in a Pompeian graffito (*C.I.L.*, IV, suppl. 4000 g). He discusses the bearing of this fact on the interpretation of ἐπιούσιος ἄπρος in the New Testament.

G. GHEDINI adds a note (*Aegyptus*, VIII, 175) to his already expressed opinion on a special meaning of *τόπος*, with reference to P. Oxy. 1492, 11.

R. MCKENZIE.

9. GENERAL WORKS, BIBLIOGRAPHY, MISCELLANEOUS NOTES ON PAPYRUS TEXTS.

N. HOHLWEIN, opening a course on papyrology in the Faculté de Philosophie et Lettres at Liège, lectured on 27 Jan. 1927 on *La papyrologie grecque*. The lecture is published in *Musée Belge*, xxxi (1927), 5-19.

J. MANTEUFFEL, whose publication of some private letters at Berlin is noted above in § 3, has also published in Polish an introduction to the study of papyrology with a select bibliography and an account of discoveries. *Wiadomości wstępne : zakresu papyrologji* in *Przegląd Historyczny*, vi, 234-57. L. MALHA has published a similar general article in Arabic, the title of which is translated into French as *Les Papyrus, leur fabrication, leur histoire, leur découverte, ce qu'ils contiennent etc.* in *Bull. Soc. Roy. d'Arch. d'Alex.*, No. 22, 236-312.

DEISSMANN's *Licht vom Osten* is reviewed by DRAGUET (*Rev. Hist. Eccl.*, xxiii, 1927, 270-3).

R. HELBIG reviews SCHUBART's *Die Papyri als Zeugen antiker Kultur* (Berlin, Walter de Gruyter, 1925, 88 pp.; a guide to the papyrus collection in the Neues Museum, Berlin) in *Phil. Woch.*, xlvii, 1927, 627-8 (high praise).

The *Raccolta Lombroso* has been reviewed by H. D[ELEHAYE] (*Anal. Bolland.*, xlv, 1926, 416-18) and W. SCHUBART (*Gnomon*, iii, 1927, 99-105). P. M. MEYER reviews vols. v (3, 4)-vii of *Aegyptus* (*Z. vergl. Rechtsw.*, xliii, 465-7).

Several references have been given above to the longer notices in the bibliography in *Byz. Z.*, xxvi, 425-75, but the whole bibliography, and not merely the portion devoted to papyri, will be found useful by students of Byzantine Egypt.

The article by O. GRADENWITZ on PREISIGKE's *Wörterbuch* referred to under § 6 above must be mentioned here also, since it includes notes on individual papyrus texts (B.G.U. 613=Mitteis, *Chr.* 89, 592, 361=Mitteis, *Chr.* 92, Amh. 67), with suggestions for restoration. *Preisigke's Wörterbuch und die Papyrologie* in *Bull. Ist. Dir. Rom.*, 1927, 177-89. Reference may also be made to the same scholar's note *ταῖς ἀληθείαις ἢ ταῖς ἀληθιναῖς?* (on B.G.U. 388, etc.) in *Archiv*, viii, 250 (see §§ 6, 8 above).

P. JERNSTEDT has published an interesting note on two of the Coptic letters (P. Lond. 1920, 1921) in *Jews and Christians in Egypt*. He makes some ingenious suggestions for readings but several of these are irreconcilable with the papyri. *Zu den koptischen Briefen an den Meletianer Patriëu* in *C.-R. de l'Acad. d. Sc. de l'U.R.S.S.*, 1927, 65-8.

R. C. HORN makes an acute and on the whole convincing attempt to explain the obscurities in the very illiterate letter P.S.I. 835. *Interpretation of a Papyrus Letter P.S.I. 835 Chaeremon to Philovenus* in *Class. Phil.*, xxii (1927), 296-300.

There are some papyrus references in a review by E. HERMANN (*Phil. Woch.*, xlvii, 1927, 870-5) of the *Festschrift* for P. KRETSCHMER (1926).

H. I. BELL.

10. MISCELLANEOUS AND PERSONAL.

In the article on PREISIGKE's *Wörterbuch* referred to in the previous section GRADENWITZ makes three useful suggestions for papyrological *subsidiä*. One is for a contrary-index, in which the words are arranged the opposite way to an ordinary index. This would often be a very great help in restoring a mutilated word of which only the conclusion remains. CATTIER's *Gazophylacium* is of very little use for this purpose, as it is too full, contains many "ghost" words, and naturally does not include the many words which occur only in papyrus texts. The second is for an index of vernacular words with their Greek equivalents. His idea is that a German-Greek index should be compiled, with key-numbers to the words, and that from this should be prepared indexes in the other principal languages, so that on looking up, e.g., an English word one would readily find the corresponding German and so the Greek. This also would be of great service to editors. The third proposal is for a "Centralstelle" in each country to which scholars engaged in papyrological work could notify their results in the correction of texts, etc., and which could transmit such results to an international centre. This suggestion deserves hearty support, though it may be difficult to carry out. Who in this country, for example, where papyrologists are so few, can be found to undertake the responsibility? I am glad to learn from GRADENWITZ himself that the first scheme at least is secured.

Prof. KALBFLEISCH informs me that KLING is engaged on the second Heft of the Giessen papyri, which is to include juristic texts prepared by O. EGER (mostly Byzantine, largely from the Archive of Flavia Anastasia). In a third Heft GLACE will publish an unknown Early Christian text. The Janda papyrus collection has now acquired some Zeno papyri, many of them fragmentary.

M. HOMBERT gives an account of the acquisitions of the Bibliothèque de papyrologie grecque of the Fondation égyptologique reine Élisabeth at Brussels. They include some papyri, chiefly Coptic but a few Greek. *Chronique d'Égypte*, II (1927), 192-4.

Reference was made in § 9 to a course in papyrology by HOHLWEIN at Liège. A syllabus of a course on juristic papyrology at Naples by ARANGIO-RUIZ is given in *Aegyptus*, VIII (1927), 175-6.

The Egypt Exploration Society's next Graeco-Roman publication will be vol. I of J. G. TAIT's *Ostraca*. This will include all the Ptolemaic ostraca in the Bodleian and several other collections; the Bodleian Roman and Byzantine are reserved for vol. II, which will contain the indexes. The volume is now passing through the press. Next after it will be published the extensive Theocritus papyrus found by JOHNSON at Antinoopolis, transcribed by him and with a commentary by HUNT. The volume will also contain some smaller fragments. When this is finished work will be resumed on the important vol. III of the *Tebtunis Papyri*, which it has been arranged to issue, like vol. I, as a joint publication of the University of California and the Egypt Exploration Society.

It is again necessary to record with regret heavy losses by death. Dr. HOGARTH was known chiefly as an archaeologist and traveller, but he worked with GRENFELL and HUNT in the Fayyûm, and was also an active and valued supporter of the Graeco-Roman branch of the Egypt Exploration Society, at whose committees he was a regular attender. He lectured for the Society on Naucratis only a year ago.

Prof. KELSEY of Michigan was also not himself definitely a papyrologist, though he edited a valuable Latin waxed diptych; but he had done more than any other man to organize the purchase of papyri for American libraries, and the already large collections at the Universities of Michigan, Wisconsin, Columbia, Cornell, and Princeton are chiefly owing to his initiative, energy, and organizing capacity. His death, like Dr. HOGARTH's, was quite unexpected, and was learned with sincere regret by all who had the privilege of knowing him. The present writer, who had been brought into specially close connection with him and had spent an unforgettable fortnight in his company at Cairo, cannot forbear to pay a tribute to the charm and kindness of a singularly lovable personality. His death is a heavy blow to the causes which he had at heart, but it is pleasant to record that for the present season at least excavations are being continued at Kôm Washîm (Aushîm). Obituary notices of Prof. KELSEY have been published by H. A. SANDERS (*Michigan Alumnus*, XXXIII, 1927, 645-7; *Class. Phil.*, XXII 1927, 308-10) and J. G. WINTER (*Class. Journ.*, XXXIII, 1927, 4-6).

Another archaeologist, who, though not a papyrologist, had done some work in the sphere of Graeco-Roman Egypt, and whose death was as premature and unlooked for as that of the scholars just mentioned was Mr. A. G. K. HAYTER, a well-known and valued member of the Egypt Exploration Society.

In K. KUNST (1895-1926), the editor of the rhetorical papyri which formed the last volume of the Berlin classical texts, has been lost a younger scholar, and one of very great promise. An obituary notice of him is published by M. SCHUSTER (*Bursians Jahresber.*, LIII, 1927, Nehr. 1-12).

Obituary notices of GRENFELL have been published by A. S. HUNT (*Proc. Brit. Acad.*, 1926-7, 8 pp.; *Aegyptus*, VIII, 1927, 114-16), WILCKEN (*Archiv*, VIII, 317), and S. R[EINACH] (*Rec. Arch.*, S. v, XXIV, 1926, 76-7); of COMPARETTI by A. NEPPI-MODONA (*Historia*, Genn.-Marzo, N. I, Anno I-V, 75-8), G. PASQUALI (*Aegyptus*, VIII, 1927, 117-36), and E. COCCHIA (*Μουσείον*, III, 1927, 245-7, not accessible to me); of PISTELLI by M. NORSI (*Aegyptus*, VIII, 108-11); of BOLL by A. REHM (*Bursians Jahresber.*, LIII, 1927, Nehr. 13-43; bibliography); and of KRÜGER by W. KUNKEL (*Gnomon*, II, 1926, 495-6).

H. I. BELL.

BIBLIOGRAPHY (1926): ANCIENT EGYPT

BY JEAN CAPART

Ce n'est pas sans une longue hésitation que j'ai accepté, à la demande du professeur F. Ll. Griffith, de continuer la bibliographie de l'Égypte ancienne dans le *Journal of Egyptian Archaeology*. La tâche en elle-même est lourde, et je ne suis pas sûr de pouvoir y consacrer tout le temps qu'il faudrait. S'il fallait réellement analyser tous les travaux publiés, elle serait impossible. Mais comme, de plus en plus, tous les matériaux bibliographiques sur l'Égypte se concentrent à la Bibliothèque de la Fondation Égyptologique Reine Élisabeth, je me suis laissé convaincre par mon savant prédécesseur qui m'assurait que les outils de travail se groupaient plus complètement entre mes mains qu'entre les siennes. Je vais essayer donc de mettre à la disposition des travailleurs dans le domaine égyptologique les renseignements qui nous arrivent de toutes parts. J'espère que les auteurs voudront bien m'aider en me communiquant au moins la notice bibliographique de leurs travaux publiés dans les revues non-égyptologiques.

Pour des raisons pratiques, je demande de pouvoir présenter en un premier bulletin sommaire le tableau des publications parues en 1926 et qui n'ont pas encore été citées dans la bibliographie 1925-6 publiée au volume XII.

Une remarque encore. Faut-il laisser tomber de très courts articles qui, à première vue, n'apportent rien de nouveau? Ou bien, puisqu'il s'agit de bibliographie, faut-il au contraire chercher à ne rien négliger de ce qui a été publié? Celui qui fait une étude détaillée d'un point a souvent constaté qu'il peut y avoir intérêt à confronter toutes les idées émises par divers auteurs et qu'une remarque accessoire donne quelquefois la solution d'un problème.

A regarder d'ensemble la bibliographie de 1926, on ne peut s'empêcher de relever le nombre considérable de petites notes qui ont été publiées de tous côtés. On relèvera, par contre, peu de livres importants de doctrine. A notre époque, il semble que les chercheurs éprouvent, plus qu'autrefois, le besoin de publier sans retard toutes les remarques de détail qu'ils font au cours de leurs travaux. Notre science, comme beaucoup, a une tendance à s'émietter. De là, peut-être, l'utilité qu'il y a de publier des bibliographies aussi complètes que possible. Sauf indication contraire, la date des publications et des volumes de revues est toujours 1926.

CONSERVATION.

Karnak. Le rapport de M. PILLET sur les fouilles de 1924-5 et l'étude d'A. LUCAS, sur le "damage caused by salt" sont analysés dans *Ancient Egypt*, 1926, 54.

H. CHEVRIER, dans le *Rapport sur les travaux de Karnak* (mars—mai, 1926) dans les *Ann. Serv.*, XXVI, 119-30, décrit ses travaux de recherches à l'intérieur du III^e pylone, véritable carrière archéologique et épigraphique. Il donne des détails sur le temple et les statues d'Akhenaten trouvés à l'est du grand temple d'Amon.

Grand Sphinx de Gîzah. La polémique au sujet des travaux de consolidation du sphinx de Gîzah a donné naissance à toute une série d'articles: J. MEIER-GRAEFE, *The Destruction of the Sphinx*, in *Burlington Mag.*, XLIX, no. 281, 90-4; SEYMOUR DE RICCI, *Le Sphinx et M. Meier-Graefe*, dans la *Revue archéologique*, XXIV, 270-1; *A disaster prevented: the Sphinx saved from collapse. The Sphinx before and after excavation: secrets revealed*, in *The Illustrated London News*, no. 4541, 800-1; *Le désensablement du grand Sphinx*, dans le *Bulletin de l'art ancien et moderne*, no. 725, 61; *Autour du grand Sphinx*, *ibid.*, no. 727, 133; *Le désensablement du Sphinx*, dans *Beaux-Arts*, 4^e année, no. 4, 51; *Patching up the Sphinx*, in *Art and Archaeology*, XXII, 194; *Repairing the Sphinx*, in *Ancient Egypt*, 1926, 14.

FOUILLES ET TRAVAUX.

J. H. BREASTED expose sous le titre de *Luxor and Armageddon. The Expansion of the Oriental Institute of the University of Chicago*, in *Art and Archaeology*, XXII, 154-66, les projets et les réalisations grandioses que la libéralité de J. D. Rockefeller, jun., lui permet d'entreprendre.

Sous la direction d'A. M. LYTHGOE, les travaux du Metropolitan Museum of Art de New York ont été poursuivis pendant la campagne 1924-5. Les fouilles à Dér el-Bahrî sont décrites par H. E. WINLOCK

celles de Lisht par AMBROSE LANSING, les relevés graphiques dans les tombes thébaines par N. DE G. DAVIES: *The Metropolitan Museum of Art. The Egyptian Expedition 1924-1925. Part II of the Bulletin of the Metropolitan Museum of Art.* New York. March.

Les résultats généraux des fouilles de l'Egypt Exploration Society et de la British School of Archaeology in Egypt sont exposés dans *Exhibition of Antiquities from Abydos and Tell-el-Amarna 1925-1926; Catalogue of prehistoric antiquities from Upper Egypt, the Fayum and the Persian Gulf.* 1926; *British School of Archaeology in Egypt and Egyptian Research Account.* Report of the 32nd year. London.

PIERRE LACAU, *Les Travaux du Service des Antiquités de l'Égypte en 1925-6*, dans les *Comptes Rendus de l'Académie*, 277-85, résume les travaux exécutés à Saqqârah, Karnak et au grand sphinx de Gizah. On trouvera quelques brèves notices sur les fouilles de diverses localités dans *Ausgrabungen und Forschungen*, dans l'*Archiv für Orientforschung*, III, 22 et 134-5; CH. BOREUX, *Fouilles en Égypte*, dans le *Larousse mensuel illustré*, VII, no. 236, 241-2; G. DE GIRONCOURT, *Les récentes découvertes archéologiques françaises en Égypte*, dans *La Géographie*, janvier-février, 76-7; ID., *Les Secrets de la vieille Égypte. Découvertes archéologiques françaises*, dans le *Bulletin de la Société géographique de Lille*, avril-juin, 73-104; *Egypt Excavations*, dans *The Antiquarian Quarterly*, no. 9, 239-40; *Égypte*, dans la *Revue archéologique*, XXIV, 79; G. JÉQUIER, *Les Fouilles archéologiques en Égypte*, dans le *Bull. de la Soc. de Géographie de Neuchâtel: Nouvelles découvertes au pays de Tout-Ankh-Amen*, dans le *Patriote Illustré*, no. 8, février, Bruxelles, 120-1 et figg.; *Résultats de fouilles en Égypte*, dans *Beaux-Arts*, 4^e année, no. 20, 307; B. VAN DE WALLE, *Avec les fouilleurs en Égypte*, dans la *Revue de Saint-Louis*, Bruxelles, 26^e année, 173-8.

Signalons tout particulièrement un excellent article de G. STEINDORFF, *Der Aegyptische Ausgrabungswinter 1925-26*, dans la *Deutsche Literaturzeitung*, N.F., 3^e Jahrg., Heft 39, 1885-1904.

G. DARESSY, *Les Recherches archéologiques en Égypte*, dans *La Science moderne*, Paris, 3^e année, no. 3, 141-9, no. 6, 297-310, no. 10, 496-506, a résumé d'une manière aussi vivante qu'utile la longue expérience qu'il possède des fouilles et de l'archéologie égyptiennes. D'après *Ancient Egypt*, 127, G. HOWARDY, *Fra Faraos Land*, Copenhague, donne une bonne idée d'ensemble de l'histoire des fouilles en Égypte.

Abušir el-Melek. A. SCHARFF, *Die archaologische Ergebnisse des vorgeschichtlichen Graberfeldes von Abušir el-Melek. Nach d. Aufzeichn. Georg Möllers bearb.*, Leipzig (49. wissenschaftliche Veröffentlichung der deutschen Orient-Gesellschaft), nous donne enfin le rapport sur les fouilles exécutées par G. Moller en 1905-6 dans le cimetière préhistorique d'Abušir el-Melek. A côté de l'inventaire méthodique de toutes les tombes, les lecteurs trouveront avec plaisir, aux pp. 71-83, un exposé clair et précis des idées de l'éditeur sur le développement des civilisations primitives en Égypte.

Abydos. Sur les fouilles de l'"Osireion," voir H. FRANKFORT, *Preliminary Report of the Expedition to Abydos 1925-1926*, in the *Journal*, XII, 157-65; *Ausgrabungen in Abydos*, in *Archiv für Orientforschung*, III, 89; *Notes and News*, in *Ancient Egypt*, 1926, 32.

Delta. A. SCHARFF, *Ein frühgeschichtlicher Fund aus dem Delta*, dans l'*O.L.Z.*, XXIX, 719-23, rassemble quelques documents archéologiques sur la civilisation archaïque du Delta à propos de quelques pièces découvertes au sud-ouest d'Alexandrie à Kôm-el-Kanâfir et que l'auteur classe au début de la 1^{re} dynastie.

Edfu. Un compte-rendu des fouilles de H. Henne à Tell Edfu est publié par A. CALDERINI dans *Aegyptus*, VII, 329.

Gizah. La tombe de la mère de Khéops est l'objet de plusieurs notices sommaires: *Ausgrabungen (Gizah)* dans *Archiv für Orientforschung*, III, 134 et 201; *Découverte d'une nouvelle tombe de Pharaon*, dans *Beaux-Arts*, IV, no. 5, 66.

Les fouilles de la nécropole sont annoncées dans *Die erste deutsche Ausgrabung in Aegypten nach dem Kriege auf den grossen Pyramiden von Gizeh*, dans les *Neue Jahrbücher für Wissenschaft und Jugendbildung*, II, 120.

L'ouvrage de CLARENCE S. FISHER, *The Minor Cemetery*, est analysé par S. A. B. MERCER, in *Journ. Soc. Oriental Research*, X, 103-4.

Saqqârah. C'est avec satisfaction qu'on peut enregistrer la publication importante de CECIL M. FIRTH and BATTISCOMBE GUNN, *Excavations at Saqqara. Teti pyramid cemeteries*, Le Caire, 2 vols. Le dégagement de la nécropole au nord de la pyramide de Teti est un des travaux les plus remarquables de l'archéologie égyptienne dans les dernières années. La moisson de faits archéologiques et de textes est considérable. La collaboration du fouilleur et de l'épigraphiste a donné les fruits les plus précieux.

Sur les fouilles à la pyramide à degrés voir C. M. FIRTH, *The world's oldest buildings: New discoveries at Sakkara*, in *The Illustrated London News*, vol. 168, 30 Jan., no. 4528, p. 179; Le compte-rendu du

Rapport de 1924-5, dans *Ancient Egypt*, 1926, 55. Voir aussi L. BORCHARDT, *Ausgrabungen von Saqqara*, dans *Archaeologischer Anzeiger. Beiblatt zum Jahrbuch des d. archaeolog. Instituts*, 455.

Les recherches de G. JÉQUIER sont décrites dans le *Rapport préliminaire sur les fouilles exécutées en 1925-1926 dans la partie méridionale de la nécropole memphite*, dans *Ann. Service*, XXVI, 44-62. Elles ont porté en ordre principal sur le Mastabat el-Far'ûn dont l'attribution à Shepseskaf paraît certaine, et sur la pyramide de la reine Oudjebten, femme de Pepi II, dont la chambre entièrement détruite contenait des "Textes des Pyramides." JÉQUIER a découvert également de curieuses "Stèles maisons." Plusieurs tombeaux de particuliers ont été découverts, dont l'un a fourni au Musée du Caire une curieuse série de modèles de victuailles en pierre. Enfin JÉQUIER a identifié l'emplacement du Portique inférieur du temple de Pepi II.

Les fouilles de la campagne précédente sont citées dans *Ancient Egypt*, 1926, 54 et 57.

Thebes. Sur le temple nouveau d'Amenophis IV à Karnak, voir *Archiv für Orientforschung*, III, 135.

Les détails à insérer dans la carte de la nécropole thébaine, d'après les données de B. BRUYÈRE et N. DE G. DAVIES (*Ann. Serv.*, 1925) sont résumés dans *Ancient Egypt*, 1926, 56 et 57.

Les travaux de l'Institut français d'archéologie sont décrits par F. BISSON DE LA ROQUE, *Rapport sur les fouilles de Médamoud* (1925), Le Caire (Rapports préliminaires, III, 1^{re} partie) et par BERNARD BRUYÈRE, *Rapport sur les fouilles de Dêir el-Médineh* (1924-5), Le Caire. (Rapports préliminaires, III, 3^e partie.)

Les fouilles de M. Mond près du tombeau de Ramose sont citées dans *Ancient Egypt*, 1926, 120 (M. A. MURRAY) et dans *Archiv für Orientforschung*, III, 135.

L'étude d'A. MORET sur *Maspero et les fouilles dans la vallée des Rois* est citée dans *Ancient Egypt*, 1926, 58; le rapport d'E. SCHIAPARELLI, sur les fouilles de la vallée des Reines est analysé longuement par E. NAVILLE, dans le *Journal des Savants*, 157-67.

Tehneh. Une fouille rapide a permis de déblayer quatre tombes. Dans l'une d'elles (le no. 3) le puits a donné la sépulture d'un vizir nouveau Ankh-Ounnoir à classer entre la XX^e et la XXIII^e dynastie: HAKIM EFFENDI ABOU SEIF, *Rapport sur les fouilles faites à Tehneh en janvier et février 1926*, dans les *Ann. Serv.*, XXVI, 32-8; P. LACAU, *Note sur la tombe no. 3 de Tehneh*, *ibid.*, 38-41.

Désert oriental. Voir dans ce *Journal*, XII, 166-7 une *Note on the ruins of Hitân-Shenshef near Berenice* par G. W. MURRAY. Époque indéterminée, d'après la poterie plutôt arabe que romaine.

Nubie. Les fouilles de H. JUNKER à Ermenne ont été l'objet d'un article par FR. V. BISSING, dans le *Berliner Philologische Wochenschrift*, 46. Jhr., no. 44, 1199-1206.

F. LL. GRIFFITH continue la publication de ses fouilles en Nubie: *Oxford Excavations in Nubia*, in *Liverpool Annals*, XIII, 17-37 (pp. 36-7, Errata in previous volumes), 49-93. Compte-rendus par A. WIEMANN, *O.L.Z.*, XXIX, 35-6 (vol. XI), et *Ancient Egypt*, 1926, 120 (vol. XIII, 1-2).

PAUL TRESSON, *Le Journal de Voyage du comte Louis de Saint-Ferriol et la découverte de la stèle de Kouban*, dans le *Bulletin de l'Institut français d'archéologie orientale*, XXVII, 29-37, apporte une importante contribution à l'histoire des fouilles de Nubie.

Soudan. G. O. WHITEHEAD et F. ADDISON, *Merotic Remains, Sudan Notes and Records*, IX, 51-8; G. O. WHITEHEAD, *Nagau and Musawwarat*, *ibid.*, 59-67.

S. A. B. MERCER, *The Recovery of forgotten Empires*, est recensé par JOHN A. MAYNARD, *Journ. Soc. Oriental Research*, X, 214; A. GUSTAVS, *Theolog. Literat.-Zeitung*, LI, 505; *Ancient Egypt*, 1926, 127.

PUBLICATION DE TEXTES.

(a) *From sites in Egypt.*

B. BRUYÈRE et CH. KUENTZ sous le titre *Tombes thébaines. La Nécropole de Dêir el-Médineh. La tombe de Nakht-Min et la tombe de Ari-Nefér*, I, fasc. 1, Le Caire (*Mémoires de l'Inst. franç.*, LIV), ont repris l'édition longtemps interrompue des tombes de la nécropole thébaine commencée par la Mission française du Caire, sous l'impulsion de Maspero. Espérons que les fascicules suivront rapidement.

Les premiers résultats épigraphiques des fouilles de Médamoud sont publiés par ÉTIENNE DRIOTON, *Rapport sur les fouilles de Médamoud* (1925). *Les inscriptions*. Le Caire. (Inst. franç. Rapports préliminaires, III, 2^e partie.)

Compte-rendus des publications de C. KUENTZ et G. LEFEBVRE, sur la version complète et abrégée de la Stèle du mariage de Rameses II, dans *Ancient Egypt*, 1926, 54 et 56; *ibid.*, 58, l'annonce de la nouvelle édition du "Poème de Pentaour" préparée par KUENTZ; *ibid.*, 30-1 (L. B. ELLIS) le compte-rendu de l'édition par A. H. GARDINER de l'Autobiography of Rekhmere.

BATTISCOMBE GUNN publie une série d'inscriptions de Saqqarah : *Inscriptions from the Step Pyramid site*. I. *An inscribed statue of King Zoser* dans *Ann. Serv.*, xxvi, 177-196, 1 pl. ; II. *An architect's diagram of the third dynasty*, *ibid.*, 197-202 ; *The inscribed sarcophagi in the Serapeum*, *ibid.*, 82-91 ; *Two misunderstood Serapeum Inscriptions*, *ibid.*, 92-4.

(b) *From Museums.*

Le texte de Horbeit édité par E. Naville (*Ann. Serv.*, x), étudié par le même dans la *Revue de l'Égypte ancienne*, I, est cité dans *Ancient Egypt*, 1926, 59, et dans les *Compte-rendus de l'Académie*, 1926, 29.

GR. LOUKIANOFF publie quelques *Nouveaux Fragments de la stèle de Piankhi* dans *Ancient Egypt*, 1926, 86-9.

L'inscription de la Statue du Caire no. 42190, inexactement copiée par G. LEGRAIN, est reproduite par G. LEFEBVRE, *Herihor, vizir*, dans les *Ann. Serv.*, 63-8, qui en tire d'intéressantes déductions historiques sur l'extinction du pouvoir des Ramessides au bénéfice du grand prêtre d'Amen.

Quelques brefs compte-rendus dans *Ancient Egypt*, 1926 : 54, B. BRUYÈRE, *Stèles trouvées à Deir el-Médineh* ; 55, G. LEFEBVRE, *Le Grand Prêtre d'Amen Harmakhis* ; 56, G. A. WAINWRIGHT, *Three Stelae from Nag ed Deir* ; 57, B. GUNN, *A sixth dynasty letter from Saqqara* ; 58, H. GAUTHIER, *Un Groupe ptolémaïque d'Héliopolis*.

La seule publication très importante est celle de KURT SETHE, *Die Achtung feindlicher Fürsten, Völker und Dinge auf altägyptischen Tongefüßscherben des mittleren Reiches*. Berlin. (Abhandl. d. preuss. Akad. d. Wiss., 1926, Phil.-Hist. Klasse, no. 5.) Les formules magiques d'exécration contre les ennemis de l'Égypte et de la famille royale renferment des documents d'une valeur exceptionnelle, surtout pour les connaissances géographiques des Égyptiens au début du moyen-empire. La reconstitution du texte au moyen des nombreux fragments peut être citée comme un véritable triomphe pour le savant auteur.

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The Cambridge Ancient History a été l'objet de nombreux compte-rendus. T. I : CHRISTIAN, *Wiener Zeitsch. f. Kunde der Morgenl.*, xxxii, 309-12 ; T. I et II : ERNST F. WEIDNER, *Archiv für Orientforschung*, III, 19 ; KAHRSTEDT, *Litteris*, III, 28-49 ; P. SCHNABEL, *Zeitsch. d. deut. Morgenland. Gesellsch.*, v, 343-9 ; FR. CUMONT, *Revue belge de philologie et d'histoire*, v, 175-81 ; T. II : F. MUNZER, *O.L.Z.*, xxix, 109-12 ; T. I-III : W. OTTO, *Literarische Wochenschrift*, no. 35, col. 1016 ; DHORME, *Revue biblique*, xxxv, 300-11 ; T. III : H. T. ROBINSON, *Expositor*, ix, 462-4.

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Dans l'ouvrage de N. JORGA, *Essai de synthèse de l'histoire de l'humanité*, I, *Histoire ancienne*, Paris, x, 390 ff., les pp. 22-48 sont consacrées à l'Égypte.

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G. SERGI, *Le prime et le più antiche civiltà. I creatori*, Torino, consacre les pages 110-36 à l'Égypte.

J. H. BREASTED, *The Conquest of Civilization*, New York et Londres, est une nouvelle édition remise au point de l'*Ancient Times* du même auteur.

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RAYMOND WEILL, *Bases, méthodes et résultats de la chronologie égyptienne*, Paris, sera lu avec utilité par tous ceux qui se préoccupent de ce grave problème historique. L'auteur ne leur apportera malheureusement pas les éléments indispensables pour résoudre définitivement la question.

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JEAN CAPART, *Thebes. The Glory of a great Past*, in collaboration with MARCELLE WERBROUCK, a paru à Londres et à New York. Quelques compte-rendus de l'édition française (1925): S. DE RICCI, *Revue critique d'histoire et de littérature*, 21-2; C. R. WILLIAMS, *Amer. Journ. Arch.*, XXX, 194-5; P. MONTET, *Revue belge de philologie et d'histoire*, V, 602-4; ID., *Revue des Études anciennes*, XXVIII, 67-8; S. A. B. MERCER, *Journ. Soc. Oriental Research*, X, 214-15; A. SCHARFF, *O.L.Z.*, XXIX, 633; CH. BOREUX, *Journal des Savants*, juillet, 325-7; R. ANTHES, *Deutsche Literaturzeitung*, 1549-51; *Archivio generale di neurologia psichiatria e psicoanalisi*, VII, no. 3; G. SARTON, *Isis*, juillet.

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A. MORET, *La Campagne de Seti I^{er} au nord du Carmel*, est analysé dans *Ancient Egypt*, 1926, 59.

T. ERIC PEET, *The Supposed Revolution of the high-priest Amenhotpe under Ramesses IX* (*Journal*, XII, 254-9), soulève une série de problèmes et montre combien nous ignorons les bases même de l'histoire des derniers Ramessides.

M. A. MURRAY, *Ancient Egypt*, 1926, 122-3, analyse le mémoire de V. STRUVE sur le grand Papyrus Harris (*Aegyptus*, VII).

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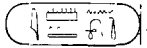
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B. GUNN, *Notes on two Egyptian Kings*, dans le *Journal*, XII, 250-3, cherche en premier lieu à confirmer la tradition égyptienne du caractère aimable et bienveillant du roi Snéfrou ; il explique ensuite les raisons qui l'empêchent d'admettre pour le nom de Toutankhamen la traduction habituelle "Living Image of Amūn." Il préfère "The Life of Amūn is Pleasing."

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ALEXIS MALLON, *La Géographie de l'Exode. Congrès international de Géographie*, Le Caire, avril 1925, v, 84-9, s'appuyant sur les études récentes de Clédet et de Gardiner cherche à montrer que "loin de le contredire, la géographie de l'isthme s'harmonise parfaitement avec le texte sacré."

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Citons ici déjà *L'Opera degli Italiani per la conoscenza dell'Egitto e per il suo risorgimento civile ed economico*, scritti di vari autori, raccolti e coordinati a cura di ROBERTO ALMEGIA. Parte prima. Rome. Compte-rendu par A. CALDERINI, *Aegyptus*, VII, 321-2.

Quelques voyages en Égypte publiés en 1926 : H. BETHGE, *Aegyptische Reise. Ein Tagebuch*, Berlin ; LUDWIG DIEHL, *Sphinx. Erlebnisse, Studien und Gedanken aus meinem Aufenthalt im Land der Wunder*, Hamburg ; V. D. EERENBEEMT, *Het eeuwige Pharaonenland*, III, IV, dans *Oppgong*, 4^e année, 97-113, 145, 150-7, 196-210, 289-303 ; JOHN FRAENKEL, *Fra Nîen til Jordan*, Copenhague, 170 pp. et figg. ; J. HEIN, *Auf biblischen Pfaden im Reich des Pharaos. Kulturbilder aus dem alten Aegypten* ; J. D'IVRAY, *Coup d'œil sur l'Égypte pittoresque*, dans *Sciences et Voyages*, 21 janvier ; ALFRED KAUFMANN, *Ewiges Stromland. Land und Mensch in Aegypten*, Stuttgart ; J. A. SPENDER, *The changing East. Travels in Turkey, Egypt and India*. Voir en outre HENRY BORDEAUX, *Voyageurs d'Orient*, Paris, 2 vol.

Mentionnons deux guides : EUSFACE REYNOLDS-BALL, *Cairo of to-day. A practical guide to Cairo and the Nile; The Valley of the Nile (1926-1927)* published by the Tourist Development Association of Egypt.

Citons enfin le travail de GEO. SOBHY, *The transliteration of the ancient Egyptian names of towns, villages, etc. into Arabic*, dans *Congrès international de Géographie*, Le Caire, 1925, v, 115-25.

FOREIGN RELATIONS.

Asie. F. NÖTSCHER, *Kanaan vor der israelitischen Einwanderung, hauptsächlich nach den ausser-biblischen Quellen*, dans *Theologie und Glaube*, XVIII, 535-49, étudie les rapports politiques du pays de Canaan avec la Babylonie et l'Égypte.

Le P. DHORME, dans le *Dictionnaire de la Bible. Supplément*, fasc. 1, 207-26, résume ce que nous ont appris les *Lettres d'El-Armana*.

W. F. ALBRIGHT, *Aman-hatpe, governor of Palestine*, dans la *Zeitschr. f. ag. Spr.*, XII, 63-4, nous montre *Aman-hatpe*, résident à Gaza, donnant ses ordres au prince de Taanach, peut-être sous le règne de Thutmes IV.

HAROLD M. WIENER, dans *Ancient Egypt*, 51-3 et 70-2, étudie *The Relations of Egypt to Israel and Judah in the age of Isaiah*.

Le livre de G. CONTENAU, *La Civilisation phénicienne*, Paris, révèle en plusieurs endroits une connaissance incomplète des données de l'égyptologie. (Compte-rendu de L. DELAPORTE, *Rec. de l'Hist. des Relig.*, 93, 144-6.)

On lira avec intérêt les remarques de G. RÜDER, *Aegyptologische Beobachtungen in Palästina und Syrien*, dans *O.L.Z.*, XXIX, 739-44. Voir aussi J. GARSTANG, *Problems in the archaeology of Palestine*, dans *Journ. Manchester Eg. and Oriental Soc.*, XII, 16.

Beisan. ALAN ROWE, *The Temples of Dagon and Ashtoreth at Beth-Shan*, dans *The Museum Journ.*, XVII, 294-304 ; *New light on Palestine over 3000 years ago: relics of Egyptian, Minoan and Hittite influences*, dans *The Illustrated London News*, 30 oct., vol. 169, no. 4567, 828-9, donne un aperçu de ses importantes découvertes de temples égyptiens des XVIII^e et XIX^e dynasties. Une série d'articles leur sont consacrées : *Ausgrabungen in Bésân*, dans *Archiv für Orientforschung*, III, 89 ; *The Antiquarian Quarterly*, 240-1 ; *Les Fouilles américaines de Beisan en 1925*, dans *Syria*, 284 ; *Les Fouilles de Beisan en*

1925, dans la *Revue archéologique*, xxiv, 80; L. ABENSOUR, *Des Richesses archéologiques sont enfouies en Syrie*, dans *Sciences et Voyages*, 4 novembre, avec 7 ill.; S. A. COOK, *The American Excavations at Beisân*, dans *Palestine Exploration Fund Quarterly Statement*, 26-30 et 91.

Byblos. Les fouilles de Byblos continuent à donner des résultats importants: A. BOISSIER, *La Sainte Byblos*, Lausanne; R. DUSSAUD, *Le Sanctuaire phénicien de Byblos d'après Benjamin de Tudèle*, dans *Syria*, VII, 247-56; *Amer. Journ. of Arch.*, xxx, 342, résumé de H. GRESSMANN, *Byblos* (1925); P. MONTET, *Les Conférences du Louvre. Byblos*, dans *L'Art Vivant*, 15 avril, 300-4; MORAND-VEREL, *Recherches archéologiques dans le Liban. L'antique cité de Byblos*, dans *L'Amour de l'Art*, juin, 219-20; MAURICE PILLET, *Temple de Byblos* (Fouilles de 1926), dans les *Comptes Rendus de l'Acad. des Inscr.*, 287; V(INCENT), *La Quatrième Campagne de fouilles à Byblos*, dans *Revue biblique*, 465-6.

W. F. ALBRIGHT, *The Date of the Foundation of the early Egyptian Temple of Byblos*, dans la *Zeitschr. f. äg. Spr.*, LXII, 62-3, donne de bonnes raisons de croire que le Roi Men-kaou.....de Byblos est Men-kaou-Hor de la V^e dynastie et non Mycérinus de la IV^e; R. DUSSAUD, *Dédicace d'une statue d'Osorkon I^{er} par Eliba'al, roi de Byblos*, est analysé dans *Ancient Egypt*, 1926, 29 avec fig. (voir aussi l'article suivant); W. SPIEGELBERG, *Zur Datierung der Ahi-ram-Inschrift von Byblos*, dans *O.L.Z.*, XXIX, 735-7, émet des doutes sérieux sur la date du XIII^e siècle av. J. C. de la fameuse inscription d'Ahi-ram: c'est aux épigraphistes de décider, les fragments de canopes au nom de Ramsès II ne peuvent servir à la détermination précise dans une nécropole bouleversée.

Saida. MAURICE DUNAND, *Note sur quelques objets provenant de Saida*, dans *Syria*, VII, 123-7, publie des vases égyptiens en bronze faisant "probablement partie de l'offrande funéraire d'Amasis en faveur d'un personnage important, peut-être un roi" de Sidon, et des fragments de stèles de style composite.

Sinai. Les fameuses inscriptions du Sinai continuent à faire l'objet de vifs débats: H. GRIMME, *Die Lösung des Sinaischrift-problems. Die altthamudische Schrift*, Münster i. W., compte-rendu par M. GINSBURGER, dans la *Rev. de l'Hist. des Relig.*, 94, 202-4; NATHANIEL REICH, *Sinai Inscriptions and their decipherment*, reprinted from *United Synagogue Recorder*, January, 4 pp.; KURT SETHE, *Der Ursprung des Alphabets. Die neuentdeckte Sinaischrift*, Berlin, 88-161, 437-75, est la réimpression du travail fondamental publié en 1916-17. (Compte-rendu dans *Literarische Wochenschrift*, col. 1203.) Les fantaisies récentes sont jugées par KURT SETHE, *Die wissenschaftliche Bedeutung der Petrie'schen Sinaijunde und die angeblichen Moseszeugnisse*, dans *Zeitschr. der deutschen Morgenländ. Gesellsch.*, N.F., v, 24-54.

Babylonie et Assyrie. W. M. FLINDERS PETRIE, *Egypt and Mesopotamia*, signale l'analogie entre certains vases égyptiens du moyen empire et la céramique pré-sargonique d'Ur; il en profite pour discuter brièvement les travaux de V. CHRISTIAN (*Anthropological Soc. of Vienna*, LV). W. STRUVE, *Ein Aegypter-Schwiegersonn des Sanherib*, dans la *Zeitschr. f. äg. Spr.*, LXII, 66, croit retrouver parmi les témoins d'un contrat un Šusanku, égyptien, gendre du roi Sanherib.

Crète. M. BOULE, *Les Relations de la Crète minoenne avec l'Égypte et la Libye*, dans *l'Anthropologie*, XXXVI, 182-3, et H. R. HALL, Compte-rendu de XANTHOUDIDES, *The Vaulted Tomb of Messarâ* (1924), dans le *Journal*, XII, 141-2, soulignent l'importance des rapports de l'Égypte avec la Crète.

Hittites. K. SETHE, *Neue Forschungen zu den Beziehungen zwischen Aegypten und dem Chattirische auf Grund ägyptischer Quellen*, dans la *Deutsche Literaturzeitung*, N.F., 3 Jahr, 1873-80, apporte d'importantes contributions nouvelles à l'étude des rapports de l'Égypte avec le royaume des Hittites, particulièrement sous le règne de Ramsès II.

Punt. E. NAVILLE, *Le Pays de Pount et les Chamites*, dans la *Rev. archéol.*, XXIII, 112-21, cherche à démontrer que "la civilisation égyptienne est chamitique; elle est due à d'anciens habitants du sud de l'Arabie qui, avant les temps historiques, s'établirent dans la vallée du Nil." Compte-rendu par S. A. B. MERCER dans le *Journ. Soc. Oriental Research*, x, 217. L. B. ELLIS, *Ancient Egypt*, 1926, 31, analyse l'étude de U. WILCKEN, *Punt-Fahrten in der Ptolemäerzeit*.



Carthage. FRANCIS W. KELSEY, *Excavations at Carthage, 1925*, Londres (compte-rendu par L. B. ELLIS dans *Ancient Egypt*, 1926, 93), cherche à démontrer l'identité entre Neith et Tanit dont le symbole serait la croix de vie sous sa forme archaïque.

Variâ. S. R(EINACH), *Égypte et Caucase*, dans la *Rev. archéol.*, XXIV, 269-70, résume les idées de FLINDERS PETRIE sur la possibilité de relations très anciennes entre ces deux régions (d'après le *Times* du 11 août).

A. ZAKHAROV, *A fragment of a crown of Osiris from the south of Russia*, dans *Ancient Egypt*, 1926, 85, publie un fragment de bronze égyptien découvert à l'embouchure du Don.

Citons enfin PAUL PELLIOT, *Les Anciens Rapports entre l'Égypte et l'Extrême Orient*, dans le *Congrès Internat. de Géographie*, Le Caire, 1925, v, 21-2, et S. SCHIFFER, *L'Amérique et l'Orient*, dans *Oriens*, Paris, no. 1, 35-6.

PHILOLOGY.

Avec la publication du 2^e fascicule d'AD. ERMAN et HERMANN GRAPOW, *Wörterbuch der ägyptischen Sprache*, Leipzig, se termine le premier volume de cette œuvre monumentale, comprenant les mots de  jusque . Signalons les compte-rendus suivants dont la plupart se rapportent seulement au premier fascicule: W. SPIEGELBERG, *Zu der ersten Lieferung des Wörterbuches der ägyptischen Sprache*, dans l'O.L.Z., XXIX, 233-6; H. KEES, *G.G.A.*, 141-8; H. O. LANGE, *Deutsche Literaturzeitung*, N.F., III, 2272; S. A. B. MERCER, *Journ. Soc. Oriental Research*, x, 304-5; A. MORET, *Revue critique d'histoire et de littérature*, XCIII, 331-4; T. ERIC PEET, *Journal*, XII, 319-20.

S. A. B. MERCER, dans *Journ. Soc. Oriental Research*, x, 107, marque brièvement sa satisfaction d'avoir à sa disposition le *Leviqne hieroglyphique* de R. LAMBERT (1925).

W. F. ALBRIGHT, *The New Cuneiform Vocabulary of Egyptian Words*, dans le *Journal*, XII, 186-90, souligne l'importance du document trouvé à Tell el-Amarna pour l'étude de la phonétique égyptienne.

Je n'ai pas vu T. G. ALLEN, *An Egyptian sign list*, dans *Amer. Journ. of Semit. Lang.*, XLII 142-3.



A. EMBER, *Several Egypto-Semitic etymologies*, dans *Oriens*, no. 1, 5-8, étudie les mots suivants: *mcb* harpoon, spear; *mcb* thirty; *fab-w* Phoenician; *cr* enter; *gm- \bar{u}* grief, mourning; *ph* be dishevelled, disarrayed; *hm* catching of fish and birds; *h \bar{p}* cover, hide; *hyg* thigh; *in* chin.

P. HAAPT, in *Journ. Amer. Oriental Soc.*, XLV, 318-20, étudie *The Etymology of Egypt, \bar{u} m greyhound*.

K. SETHE, *Zur ägyptischen Herkunft des hebraischen Masses Ephra*, dans la *Zeitschr. f. ag. Spr.*, LXII, 61, apporte une confirmation d'ordre phonétique à la dérivation de la mesure hébraïque du mot égyptien *ip-t*.

La petite grammaire de G. RÖDER, *Ägyptisch. Grammatik*, est annoncée par A. WIEDEMANN, dans *Theolog. Lit. Zeitung*, LI, 389.

H. KEES, *Grammatische Kleinigkeiten*, est analysé par L. B. ELLIS, dans *Ancient Egypt*, 1926, 31.

H. WIESMANN, *Elliptische Duale a potiori in Ägyptischen*, dans la *Zeitschr. f. ag. Spr.*, LXII, 66-7, attire l'attention sur les curieux duels de la forme  et .

W. TILL, *Die Zusammenhänge zwischen den ägyptischen und semitischen Personalpronomina*, dans la *Wiener Zeitschr. für d. Kunde d. Morgenl.*, XXXIII, 236-52, étudie les rapports entre les pronoms personnels égyptiens et sémitiques. Du même auteur: *Die Überreste des altägyptischen unbetonten (alteren) Pronomen absolutum im Koptischen*, *ibid.*, 125-30. Je n'ai pas vu ces deux travaux, pas plus que: K. SETHE, *Die ägyptischen Ausdrücke für "Jeder" und ihre semitischen Entsprechungen, ein neues Zeugnis für die Verwandtschaft*, dans la *Zeitschr. für Semitistik*, v, 1-5.

K. SETHE, *Das Zahlwort "fünf."* dans la *Zeitschr. f. ag. Spr.*, LXII, 69-1, montre que le nombre cinq se lit, masc. *dj-w*, fem. *dj-t*.

L'étude de W. SPIEGELBERG, *Die neuägyptische Proposition m-dr "wegen,"* est analysée par L. B. ELLIS, dans *Ancient Egypt*, 1926, 30. Il y a lieu d'ajouter le travail de K. SETHE, *Neuägyptisches m-dr für m-dj, mit Beiträgen zur Erklärung des Amenemope-Buches*, dans la *Zeitschr. f. ag. Spr.*, LXII, 5-8. W. SPIEGELBERG, *Die Konjunktion $\overline{\text{hr}}$ et "zu der Zeit wo, wann, wenn, da, weil,"* dans la *Zeitschr. f. ag. Spr.*, LXII, 42-3, complète son étude antérieure dans le *Rec. de Trav.*, XXVI, 38.

Quelques travaux sur la phonétique: AARON EMBER, *Partial Assimilation in Old Egyptian*, dans *Paul Haupt Festschrift*, Leipzig, 300-12; *id.*, *s to s before a labial in Egypt; Egypto-Semitic names for parts of the body*, dans *Journ. Amer. Oriental Soc.*, XLVI, 351; W. F. ALBRIGHT, *Another case of Egyptian ä = Coptie é*, dans la *Zeitschr. f. ag. Spr.*, LXII, 64; K. SETHE, *Die angebliche Bezeichnung des Vokals ē im Demotischen*, *ibid.*, 8-13.

H. RANKE, *Tiernamen als Personennamen bei den Ägyptern*, est résumé par L. B. ELLIS, dans *Ancient Egypt*, 1926, 31.

Deux études de K. SETHE sont consacrées à éclairer la question de noms royaux: *Der Horus- und der nb-tj-Name des Königs Cheops; die mit den Bezeichnungen der Schiffergeräte $\overline{\text{h}}$ und $\overline{\text{f}}$ gebildeten Namen der Mentuhotp-Könige*, dans la *Zeitschr. f. ag. Spr.*, LXII, 1-3 et 3-5.

PALÉOGRAPHIE.

EDUARD NAVILLE, *L'Écriture égyptienne. Essai sur l'origine et la formation de l'une des premières écritures méditerranéennes*, expose une fois encore ses idées sur les principes fondamentaux de l'écriture

hiéroglyphique et combat ardemment les transcriptions généralement admises dans l'école égyptologique. (Compte-rendu par D. WARNOTTE dans la *Rev. de l'Inst. de Sociologie*, Bruxelles, 565-6.)

WON KENN, *Origine et évolution de l'écriture hiéroglyphique et de l'écriture chinoise*, Lyons (Études et documents publiés par l'Institut franco-chinois de Lyon, 1), étudie ce qu'il appelle les "écritures sœurs." "Chacune d'elle a connu un développement particulier qui la fit indépendante de l'autre" et pour reprendre une expression de Panthier, "si elles ont de grands rapports de ressemblances, ce fait est dû aux lois générales de l'esprit humain."

SIEGFRIED SCHOTT publie en un texte autographié d'une manière malheureusement peu agréable sa thèse: *Untersuchungen zur Schriftgeschichte der Pyramidentexte*, Heidelberg. En se servant des variantes des textes des pyramides il présente une série de remarques fort importantes sur l'histoire et l'ancienneté de ces textes fameux.

W. SPIEGELBERG, *Plutarchs Deutung der Hieroglyphe der Binse*, dans *Paul Haupt Festschrift*, 313-14, montre par l'exemple du chapitre 36 du traité de Iside et Osiride combien Plutarque était exactement renseigné du sens des hiéroglyphes.

S. A. B. MERCER, dans *Journ. Soc. Oriental Research*, x, 106, loue D. PATON, *Animals of Ancient Egypt* (1925).

RELIGION.

Voici d'abord quelques ouvrages généraux faisant une part à la religion égyptienne: H. GUNDEL et L. Z-CHARNACK, *Die Religion im Geschichte und Gegenwart*, Tübingen, col. 95 et s.; R. KREGLINGER, *L'Évolution religieuse de l'humanité*, Paris; CHANTEPIE DE LA SAUSSAYE, *Lehrbuch der Religionsgeschichte*, 4^e édit. (C.-R.: VAN DER LEEUW, *Nieuwe Theolog. Studien*, IX, 146-8), la partie égyptienne par H. O. LANGE (1924); N. SODERBLUM, *Manuel d'histoire des religions*, Paris (1925) (C.-R. par R. KREGLINGER, *Revue de l'histoire des religions*, XCIII, 173-4); H. VORWAHL, *Die Religionen des Ostens. 2. Aegyptische und semitische Religionen*, Breslau.

L'atlas de H. BONNET, *Aegyptische Religion (Bilderatlas zur Religionsgeschichte hrsg. von H. HAAS Lief. 2-4)*, est l'objet de quelques remarques de J. W. HAUER, *O.L.Z.*, XXIX, 326-7.

Le très utile recueil de TH. HOPFNER, *Fontes historiae religionis aegyptiacae*, est l'objet de plusieurs compte-rendus: K. PREISENDANZ, dans *Gnomon*, II, 478-81; J. JÜTHNER, dans *Theologische Revue*, XXV, 85; S. A. MERCER, dans *Journ. Soc. Oriental Research*, x, 108.

L'ouvrage classique de H. GRESSMANN, *Altorientalische Texte zum Alten Testament*, paraît en une seconde édition révisée et augmentée. Berlin. La partie égyptienne est l'œuvre de H. RANKE (pp. 1-107).

TH. FRIEDRICH, *Israel und seine Religion im Rahmen der vorderasiatisch-ägyptischen Kultur*, Leipzig (1925), est analysé par F. SCH... dans *Bayer. Blatt. f. d. Gymn. Schulw.*, LXII, 55.

Le livre de SIR JAMES G. FRAZER, *The worship of Nature*, I, Londres, contient de nombreuses pages consacrées à la religion égyptienne.

Dans W. ENGEL, *Die Schicksalsidee im Altertum. Religionswiss. Untersuchung (Veröffentlichungen des Indogermanischen Seminars der Universität Erlangen, Bd. 2)*, Erlangen, on trouvera un chapitre sur l'idée du destin chez les Égyptiens.

S. A. B. MERCER, *Growth of Religion and Moral Ideas in Egypt*, est analysé par J. HOSCHAUDER, dans *Jev. Quart. Rev.*, XVII, 204-5.

Il est douteux que H. P. BLOCK, *Eine Gotterstatue aus der Spätzeit*, dans *Acta Orientalia*, 1926, v, 74-5 et pl. i, représente un dieu égyptien.

Amon. W. SPIEGELBERG, *Der Heilige Widderkopf des Amon*, dans la *Zeitschr. f. äg. Spr.*, LXII, 23-7, avec 4 fig., donne la preuve que la tête de bélier comme emblème d'Amon rare sous la XVIII^e dynastie s'est répandue depuis la XIX^e.

Apis. FR. W. v. BISSING publie *Eine Apisfigur in der Haltung der Adlocutio* dans *Festschrift f. P. Haupt*, 295-9, une statuette en bronze de sa collection, et une autre pièce analogue d'Athènes: *Apis Imperator*, dans *Archiv für Orientforschung*, III, 119-20.

Hathor. A. M. HOCART consacre une note aux "*Phallic Offerings to Hathor*" dans *Man*, XXVI, 192. Il s'agit d'ex-votos trouvés à Dér el-Bahri.

Imhotep. Le dieu de la médecine Imhotep a été l'objet d'un livre bien fait de JAMIESON B. HURRY, *Imhotep. The vizier and physician of King Zoser and afterwards the Egyptian God of Medicine*. On en trouvera des compte-rendus par A. CALDERINI, dans *Aegyptus*, VII, 342; H. O. LANGE, dans *Deutsche Literaturzeitung*, XLVII, no. 51; M. A. M(URRAY), dans *Ancient Egypt*, 1926, 126. Voir un résumé sous le titre de *Imhotep. Egyptian deity of healing*, dans *The Antiquarian Quarterly*, 1926, 221-4, 3 fig.

Le livre de W. ADDISON JAYNE, *The healing gods of ancient civilizations*, 1925, est l'objet de compte-rendus par W. R. HALLIDAY, dans *Journal*, XII, 324-5; R. KREGLINGER, dans *Revue de l'histoire des religions*, XCIV, 196-9; S. R(EINACH), dans *Rev. Arch.*, XXIII, 370.

Isis et Osiris. L'étrange livre de L. CHISDA-GOLDBERG, *Der Osirisname "Roi." Ein Osirisname in der Bibel*, 1925, est résumé par S. A. B. M(ERCER) dans *Journ. Soc. Oriental Research*, X, 322, et exécuté par A. CUNY, *La Bible et Osiris*, dans *Rev. des Études anciennes*, XXVIII, 203. Je n'ai pas vu le compte-rendu de N. SCHLÖGL, dans *W.Z.K.M.*, XXXIII, 252-74.

L. B. ELLIS, *Isis at Cologne and Aix*, dans *Ancient Egypt*, 1926, 97-101, avec 4 fig., illustre le culte d'Isis dans la région rhénane.

Le livre classique de J. G. FRAZER paraît en traduction française: *Atys et Osiris*. Divers compte-rendus: *Mercur de France*, no. du 15 décembre 1926; A. CALDERINI, dans *Aegyptus*, VIII, 342-3; R. KREGLINGER, dans *Rev. de l'hist. des religions*, XCIII, 334-5; S. R(EINACH), dans *Rev. arch.*, XXIV, 295.

H. JUNKER, *Die Osirisreligion und der Erlösungsgelanke bei den Aegyptern*, dans *Semaine Internationale d'Éthnologie religieuse*, 4^e session, Milan, 1925-6, 276-89, est une très fine étude sur le problème de l'expiation dans le cadre de la religion osirienne.

CH. PICARD signale une procession isiaque d'après un modèle égyptien sur une columna caelata du sanctuaire des dieux égyptiens de la 9^e région à Rome (d'après G. MANCINI, *Not. Scavi*, 1925, 237-9), dans *Rev. des Études grecques*, 1926, 162.

L'ouvrage d'A. RUSCH, *Die Stellung des Osiris im theologischen System von Heliopolis*, 1924, est l'objet de compte-rendus de L. B. E(LLIS) dans *Ancient Egypt*, 1926, 126; de H. O. LANGE dans *Deutsche Literaturzeitung*, 1926, col. 798; de J. LIPPL dans *Theologische Revue*, XXV, 1926, 126-7; de P. VOLZ dans *Theologische Literaturzeitung*, LI, 1926, no. 10.

Je n'ai pas vu M. SCHEDE, *Isis-Prozession*, dans *Angelos*, II, 60 et s., 1 pl.

C'est Osiris lui-même qui nous parle, assure PETER MILES, dans le livre intitulé *The Book of Truth or the Voice of Osiris. Set down in the House of El Eros-El Erui, they being male-female, born according to the laws governing the Human-Adamic race, this being their fourth Incarnation!* Heureux éditeur... Pauvres lecteurs!

Kolanthes. Le dieu sur lequel W. SPIEGELBERG attira l'attention dans la *Zeitschr. f. ag. Spr.*, LVIII, 155, est l'objet d'une note de J. BILABEL, *Der Gott Kolanthes*, dans *Archiv f. Papyrusforschung*, VIII, 62.

Nephotes. W. SPIEGELBERG, *Der Gott Nephotes (Nfr-htp) und der κυβερνήτης des Nils*, dans *Zeitschr. f. ag. Spr.*, LXII, 35-7, éclaircit plusieurs points relatifs au dieu Nfr-htp et aux fêtes du Nil à Silsilis dont le κυβερνήτης était sans doute un prêtre.

Pe-neb-onch. W. SPIEGELBERG, *Der Schlangengott Pe-neb-onch*, dans *Zeitschr. f. ag. Spr.*, LXII, 37-8, démontre que le dieu Pe-neb-onch n'est autre chose qu'un serpent dont on possède l'image sur un petit cercueil thébain du Musée de Berlin.

Sekhmet. La liste s'allonge toujours des formes de Sekhmet commémorées par les statues du temple de Mont: H. GAUTHIER, *Une nouvelle statue thébaine de la déesse Sukhmet*, dans *Ann. Serv.*, XXVI, 95-6, en signale une nouvelle.

P. LACAU, *Sur un des blocs de la Reine Maat-ka-re*, dans *Ann. Serv.*, XXVI, 131-8 étudie la "Course d'Apis" célébrée par la reine Hatshepsout au tabernacle d'albâtre appelé "la Fondation d'Amon est stable."

Le culte proprement dit et ses diverses manifestations ont été traités par plusieurs auteurs: HANS BONNET, *Die Symbolik der Reinigungen im ägyptischen Kult*, dans *Angelos*, I, 103-21; AYLWARD M. BLACKMAN, *Oracles in Ancient Egypt*, dans *Journal*, XII, 176-86; MAURICE CANNEY, *On Sand Rites*, dans *Journal of the Manchester Egyptian and Oriental Soc.*, XII, 10; A. SCHARFF, *Aegyptische Sonnenlieder* (1922): compte-rendu par S. A. B. MERCER, *Journ. Soc. Orient. Research*, X, 218-19; KURT GALLING, *Der Altar in den Kulturen des alten Orients* (1925): compte-rendus par V. MÜLLER, dans *O.L.Z.*, XXIX, 27-31 et S. A. B. MERCER, dans *Journ. Soc. Orient. Research*, X, 212-13.

W. SPIEGELBERG et WALTER OTTO, *Eine neue Urkunde zu der Siegesfeier des Ptolemaios IV und die Frage der ägyptischen Priestersynoden*, dans les *Sitzungsberichte der Bayerischen Akademie der Wissenschaften*, Philosophisch-philologische und historische Klasse, 1926, 2. Abhandlung, est une importante contribution à l'étude de la vie religieuse égyptienne à l'époque des Ptolémées.

Magie. Le livre de FR. LEXA sur la magie est l'objet de compte-rendus d'A. CALDERINI, dans *Aegyptus*, VII, 338-40, et de D. WARTOTTE, dans *Revue de l'Institut de Sociologie*, Bruxelles, 1926, 560-1. L'article "Miracles" by compressed air: tricks of ancient Egyptian priests, dans *Illustrated London News*, 25 déc., 1926, 1265, fait preuve de plus d'imagination que d'érudition. La thèse de H. W. OBBINK, *De magische beteekenis van den naam* (1925) est analysée par R. ANTHES, dans *Literarische Wochenschrift*,

1926, col. 1287, C. VAN CROMBRUGGHE, dans *Le Muséon*, xxxix, 370-1, S. A. B. MERCER, dans *Journ. Soc. Orient. Research*, x, 305-6. Citons ici l'étude de HERMANN RANKE, *Zur Namengebung der Aegypter*, dans *O.L.Z.*, xxix, 733-5.

W. R. DAWSON, *Some Observations on the Egyptian Calendars of lucky and unlucky days*, dans *Journal*, xii, 260-4, établit la proportion des jours heureux, malheureux ou douteux de l'année égyptienne.


Attirons l'attention sur le travail de W. DEONNA, *Amulettes de l'Égypte contemporaine*, dans la *Revue d'ethnographie et des traditions populaires*, Paris, vii, 1926, 237-44.

Culte des Morts. H. KEES, *Totenglauben...* est critiqué par FR. v. BISSING, dans *Berliner Philologische Wochenschrift*, xlvi, 1123-32.

W. BREDE KRISTENSEN, *Het Leven uit den dood. Studiën over egyptischen en oud-griekischen Godsdienst*, 1926, étudie les problèmes suivants : Les conceptions du mort comme ennemi et ami de la vie, la mort de l'homme—La force vitale magique et ses symboles, la loi de la vie cosmique et éthique—Le temple et la tombe considérés comme lieux de résurrection, l'érection des images et symboles—La réalisation de la résurrection dans le culte divin, les barques sacrées, les mystères d'Osiris.

PIERRE LACAU, *Suppression des noms divins dans les textes de la chambre funéraire*, dans *Ann. Serr.*, xxvi, 69-81, donne un intéressant ajout à son étude capitale dans la *Zeitschr. f. äg. Spr.*, 1914.

P. MONTET, *Chronique égyptologique*, dans *Revue des études anciennes*, xxviii, 61-2, analyse l'édition de G. LEFEBVRE du *Tombeau de Pésoiris*.

E. NAVILLE, *Les Premiers Mots du Chapitre XVII du Livre des Morts*, dans *Bulletin de l'Institut français d'archéologie orientale*, xxvi, 195-9, continue la polémique avec K. SETHE sur le sens de l'expression .

W. SPIEGELBERG, *Die Falkenbezeichnung der Verstorbenen in der Spätzeit*, dans *Zeitschr. f. äg. Spr.*, lxii, 27-34, montre qu'à la basse époque les défunts sont désignés parfois comme des "faucons."

On doit enfin à A. WIEDEMANN une copieuse étude sur la croyance aux esprits : *Der Geisterglauben im alten Aegypten*, dans *Anthropos*, xxi, 1-37.

SCIENCE.

Médecine. *Egyptian Medicine*, dans *The Periodical*, xi, 1926, 140, annonce le livre de HURRY sur Imhotep. L'étude de FR. CUMONT, *Le Sage Bothros ou le Phylarque Aretus*, dans *Revue de Philologie*, 1926, 19-33, traite incidemment de la médecine égyptienne.

WARREN R. DAWSON commence une série de recherches sur l'anatomie, la médecine et la chirurgie qui promettent de donner de précieux résultats : *Medicine and Surgery in Ancient Egypt*, dans *Asiatic Review*, 1926, 165-76 ; *Three anatomical Terms*, dans *Zeitschr. f. äg. Spr.*, lxii, 1926, 20-3 : *md-t* cheeks ; *wdd* gall, gall-bladder ; *kns* pubes, hypogastric region.

B. EBBELL, *Die ägyptischen Krankheitsnamen*, dans *Zeitschr. f. äg. Spr.*, lxii, 1926, 13-20, identifie l'épilepsie, l'hématurie, les cloches et le bouton d'Orient. W. WRESZINSKI, *Zur altägyptischen Tierheilkunde*, dans *O.L.Z.*, xxix, 1926, 727-32, donne une nouvelle traduction commentée du Papyrus vétérinaire de Kahun.

Botanique. WARREN R. DAWSON, *The Plant called "hairs of the earth,"* dans *Journal*, xii, 1926, 240-1, identifie la plante *sn̄t* avec le fenugrec (*Trigonella fenum graecum* L.).

O. MATTIROLI, *I vegetali scoperti nella tomba dell' architetto Kh̄u e di sua moglie Mir̄it nelle necropoli di Tebe*, dans *Reale Accad. delle scienze di Torino*, lxi, 1926, 545-68, apporte une contribution importante à la botanique pharaonique.

Zoologie. H. RANKE, *Altägyptischer Tierbilder* (1925), est l'objet d'un compte-rendu de H. BONNET, dans *O.L.Z.*, xxix, 1926, col. 343.

H. BOUSSAC, *Le Canis typhonicus*, dans *La Nature*, 31 juillet, 1926, 65-7 et 5 fig., est une nouvelle tentative d'identification de l'animal de Seth.

Les momies de chevaux découvertes à Sakkârah ont été l'objet de plusieurs notes : *The first mummified horse found and the earliest known specimen in ancient Egypt*, dans *The Illustrated London News*, 17 juillet 1926, 100, 3 fig. ; *Mummies of two horses in the Sakkara necropolis*, dans *Art and Archaeology*, déc. 1926, 243 ; *Revue archéologique*, xxiv, 1926, 272 ; R. DUSSAUD, dans *Comptes Rendus de l'Académie*, 1926, 205.

J. W. MURRAY, *Graves of Oxen in the eastern desert of Egypt*, dans *Journal*, xii, 1926, 248-9, pl. xlv, signale de curieuses tombes de bœufs, dont la date reste d'ailleurs indéterminée.

L'important mémoire de CL. GAILLARD, *Recherches sur les poissons*, est loué par P. MONTET dans *Revue des Études anciennes*, xxviii, 1926, 63-4. Le livre de W. RADCLIFFE, *Fishing from the Earliest Times*, a paru en une seconde édition.

Dans le *Field-Museum of Natural History: Anthropology*, leaflet 23: LAUFER, *Ostrich egg-shell cups of Mesopotamia and the ostrich in ancient and modern times*, on trouvera, pp. 16-20, des renseignements sur l'autruche dans l'ancienne Égypte.

Mathématiques. L'édition par T. ERIC PEET du Papyrus Rhind a été l'objet d'un compte-rendu important par K. SETHE, dans *Jahresber. d. deutschen Mathematiker-Vereinigung*, XXXIII, 139-43.

Les spécialistes tournent leur attention vers les problèmes posés: H. BOSMANS, *Note sur les mathématiques égyptiennes par Vetter, Wieleitner et Karpinski*, dans *Revue des questions scientifiques*, avril, 1926, 481; L. CH. KARPINSKI, *The Sources of Greek Mathematics*, chapitre I^{er} de *Nicomachus of Gerasa, Introduction to Arithmetic*, transl. by M. L. d'Ooge, New York, 1926; O. NEUGEBAUER, *Die Grundlagen der ägyptischen Bruchrechnung*, Berlin, 1926; O. NEUGEBAUER, *Ueber die Konstruktion von sp "Mal" im mathematischen Papyrus Rhind*, dans *Zeitschr. f. ag. Spr.*, LXII, 1926, 61-2; ABEL REY, *Coup d'œil sur la mathématique égyptienne*, dans *Revue de synthèse historique*, xli, 1926, 19-62; H. WIELEITNER, *Kannten die Aegypter den Begriff eines allgemeinen Bruchs?*, dans *Mitteilungen zur Gesch. der Medizin und der Naturwissenschaften*, xxv, 1926, 1-4.

Astronomie. Le lever de Sirius est l'objet de nouvelles observations par L. BORCHARDT et P. V. NEUGEBAUER, *Beobachtung des Fruhaufgangs des Sirius in Aegypten*, dans *O.L.Z.*, xxix, 1926, 309-16. Je n'ai pas vu M. P. NILLSON, *La Computation des temps primitifs et l'origine du calendrier*, dans *Scientia*, xxxix, no. 170, 393 et s.

Métrologie. Deux volumes du Catalogue des collections égyptiennes de l'University College à Londres sont consacrés aux poids et mesures: FLINDERS PETRIE, *Ancient Weights and Measures* (E. R. A. and British School of Arch. in Egypt, xxxix); *Glass stamps and weights* (id., xl).

Les deux études de R. WEILL, *La "kite" d'or de Byblos* et *L'unité de valeur shat*, sont analysées avec des remarques intéressantes dans *Ancient Egypt*, 1926, 58 and 59. P. 58 analyse d'ED. NAVILLE, *L'Or bon d'Égypte*.

HENRY LYONS, *Two notes on land-measurement in Egypt*, dans *Journal*, xii, 1926, 242-4, pl. xliii, et R. W. SLOLEY, *An ancient surveying instrument: the Groma*, dans *Journal*, xii, 1926, 65-7, 3 fig., nous initient au travail des anciens géomètres arpenteurs; tandis que H. SOTTAS s'occupe des *Mesures itinéraires ptolémaïques et le papyrus démotique 1389 de Heidelberg*, dans *Aegyptus*, vii, 1926, 237-42.

Divers. L'ouvrage d'A. LUCAS, *Ancient Egyptian Materials*, Londres, 1926, est de toute première importance, non seulement pour l'étude des antiquités, mais aussi pour l'histoire des sciences.

Citons enfin quelques articles sur diverses questions techniques se rattachant aux sciences: CH. BEAUGÉ, *Les Carrières antiques en Haute-Égypte*, dans *Bulletin de la Société des Ingénieurs coloniaux*, no. 87, Paris, 1926, 20-34; J. BARTHOUX, *Les Fards, pommades et couleurs dans l'antiquité*, dans *Congrès international de Géographie*, Le Caire, iv, 251-62; EARLE RADCLIFFE CALEY, *The Leyden Papyrus X*, dans *Journal of Chemical Education*, iii, 1926, 1150-66; WILLY B. NIEMANN, *Das Eisen im alten Aegypten*, dans *Technik und Kultur*, xvii, 1926, 61-4; BESSE H. SCHULZE, *Bier und Bierbereitung bei den Völkern der Urzeit, fasc. 1: Babylonien und Aegypten*, 1926.

LITTÉRATURE.

Les études en langue arabe ne pourraient-elles être accompagnées d'un bref résumé en français? Cela permettrait au moins de les classer sans risque d'erreur: L. MALHA, *Les papyrus, leur fabrication, leur histoire, leur découverte, ce qu'ils contiennent, etc.*, dans le *Bulletin de la Société archéologique d'Alexandrie*, xxii, 1926, 212-36.

Les travaux d'A. ERMAN, *Die Literatur* et *Die ägyptischen Schulerhandschriften*, sont analysés, le premier par W. ENGELKEMPER, dans *Theologische Revue*, xxv, 1926, 438-40, le second par H. O. LANGE, dans *O.L.Z.*, xxix, 1926, 632-3.

H. RANKE réédite une série importante de traductions dans H. GRESSMANN, *Altorientalische Texte zum Alten Testament*. 2^e édit., Berlin, 1926, 1-107.

H. GRAPOW, *Die bildlichen Ausdrücke des Ägyptischen* (1924) est l'objet de compte-rendus de S. A. B. MERCER, dans *Journ. Soc. Orient. Research*, x, 1926, 107-8, et T. ERIC PEET, dans *Journal*, xii, 1926, 320. F. LEXA, *Les Ornaments poétiques du langage*, résumé dans *Ancient Egypt*, 1926, 58.

B. GUNN, *Some Middle-Egyptian Proverbs*, dans *Journal*, xii, 1926, 282-4, a retrouvé très habilement un certain nombre de "citations implicites" sous la plume des anciens scribes.

Je n'ai pas vu HORACE WALPOLE, *Hieroglyphic Tales*, 1926.

D. C. SIMPSON, *The Psalmists. Essays on their religious experience and teaching, their social background*,

and their place in the development of Hebrew Psalmody par H. GRESSMANN, H. W. ROBINSON, T. H. ROBINSON, G. R. DRIVER, A. M. BLACKMAN, Londres, 1926, traite du problème si important des relations entre la littérature égyptienne et la littérature hébraïque.

La Sagesse d'Amenemope reste au premier plan des études : F. LL. GRIFFITH, *The Teaching of Amenophis the son of Kanakht*. Papyrus B.M. 10474, dans *Journal*, XII, 1926, 191-231, en donne une nouvelle traduction commentée que D. C. SIMPSON fait suivre d'une étude sur les rapports avec le livre des Proverbes : *The Hebrew Book of Proverbs and the teaching of Amenophis*, dans *Journal*, XII, 1926, 232-9. L. KEIMER, *The Wisdom of Amen-em-ope and the proverbs of Solomon*, traite le même sujet dans *American Journal of Semitic Languages and Literature*, XLIII, 1926, 8-21.

S. R. K. GLANVILLE, *A New Duplicate of the Hood Papyrus*, dans *Journal*, XII, 1926, 171-5, attire l'attention sur le document B.M. 10379 qui donne un duplicata du "manuel de hiérarchie." L'auteur fait espérer comme prochaine l'édition par Gardiner du fameux Glossaire Golenischeff.

W. R. DAWSON, *The Papyrus Lansing*, dans *Zeitschr. f. äg. Spr.*, LXII, 1926, 64-5, signale deux passages du Papyrus Lansing connus déjà d'autre part ; ce sont 7, 1-4 = Sallier I, 6, 5-8 et Anastasi V, 16, 5-17, 1, et 11, 1-7 = Anastasi IV, 8, 7-9, 2.

Je me contente de signaler N. MESCERSKIÏ (sur la traduction de l'entretien d'un désabusé avec son âme [en russe]) dans *Zapiski Kollegii Vostokovedor pri Azjatskom Musei Rossyskoj Akademi Nauk*, Leningrad, II, 1926 (?), 365-72.

FRANÇOIS LEXA, *Papyrus Insinger. Les enseignements moraux d'un scribe égyptien du premier siècle après J. C.*, Paris, 1926, 2 vols., a donné son édition, attendue depuis longtemps, du fameux papyrus de Leyde.

Un bon article de vulgarisation a été écrit par G. RÖDER, *Erziehung und Unterricht im alten Aegypten*, dans *Volkerkunde. Beiträge zur Erkenntnis von Mensch und Kultur*, II, 1926, 85-90.

LÉON KÉON, *Le civil Ex-Libris. Conte de l'Égypte ancienne*, dans *Bulletin de l'Association belge des collectionneurs et dessinateurs d'Ex-Libris*, II, 1926, 21-3, est une amusante fantaisie à propos de l'ex-libris d'Aménophis IV (*Journal*, XII, 1926, 30-3).

ARCHÉOLOGIE.

Préhistoire. L'ouvrage de J. DE MORGAN, *La Préhistoire orientale*, I, est l'objet de plusieurs comptes-rendus : L. CAPITAN, dans *Journal des Savants*, 1926, 450-2 ; J. CHARPENTIER, dans *Journ. of the Royal Asiatic Soc.*, 1926, 269-73, 358-62 ; G. RÖDER, dans *Literarische Wochenschrift*, 1926, 1131 ; A. VINCENTI, dans *Revue des questions historiques*, LIV, 1926, 148-55 ; *Journ. of Hell. Studies*, 1926, 141-2. Le deuxième volume intitulé : *L'Égypte et l'Afrique du Nord* a paru, Paris, 1926, VI, 435 pp., 5 pl. et figg.

Quelques notes sur l'homme préhistorique : FLINDERS PETRIE, *Early man in Egypt*, dans *Oriens. The Oriental Review*, Paris, I, 1926, 19 ; *Report of the Proceedings of Section H of the British Association, Oxford Meeting*, dans *Man*, XXVI, 1926, 171-2 ; S. REINACH, *L'Homme préhistorique en Égypte*, dans *Revue archéologique*, XXIV, 1926, 269.

E. S. THOMAS étudie comparativement les dessins de l'Égypte, de la Libye et de l'Espagne primitive : *A comparison of drawings from ancient Egypt, Libya and the South Spanish Caves*, dans *Journ. of the Royal Anthropol. Inst.*, LVI, 1926, 385-94, 7 fig.

Le problème du préhistorique du Fayoum a été éclairé par les remarquables études d'E. W. GARDNER et G. CATON THOMPSON, *The Recent Geology and Neolithic Industry of the Northern Fayum Desert*, dans *Journ. of the Royal Anthropol. Inst.*, LVI, 1926, 301-23, pls. xxxiv-xli, carte ; voir en suite : FLINDERS PETRIE, *Observations on "the recent geology and neolithic industry".....The history of the Fayum Lake*, ibid., 325-6.

P. BOVIER LAPIERRE signale diverses stations : *Les gisements paléolithiques de la plaine de l'Abassiéh*, dans *Bulletin de l'Institut d'Égypte*, VIII, 1926, 257-75, figg. ; *Stations préhistoriques des environs du Caire*, dans *Congrès international de géographie*, Le Caire, IV, 1926, 298-308 ; *Une Nouvelle station néolithique (El-Omarî) au nord d'Héliouan*, ibid., 268-82.

Les problèmes généraux du préhistorique et du passage à la période historique sont étudiés par A. SCHARFF, dans GEORG MÖLLER, *Die archaologischen Ergebnisse des Vorgeschichtlichen Gräberfeldes von Abusir el-Meleq*, Leipzig, 1926.

Citons encore : C. CALICE, *Zur Vorgeschichte der ägyptischen Kultur* (en hongrois avec traduction allemande), dans *Archaeologiai Ertesito*, XI, 1923-6, Budapest.

Musées : BERLIN. *Erwerbungen vom März und April 1926: Ägyptische Abteilung*, dans *Berliner Museen Berichte*, XLVII, 1926, 73-4.

BRITISH MUSEUM. H. R. WALL signale de récentes acquisitions dans *The British Museum Quarterly*, I, 1926, 42-3, pl. xxxiii et 65-6, pls. xxxv-xxxvi.

CAIRE. G. RÖDER donne une nouvelle édition du Guide: *Führer durch das Museum der ägyptischen Altertümer in Kairo*, 1926.

DARMSTADT. *Landesmuseum Darmstadt. Kunst- und historische Sammlungen. Verzeichniß der ägyptischen Sammlung* (1925).

HAMBURG. M. SACERLANDT, *Bericht über die Neuerwerbungen des Jahres 1925-26. Justus Brinckmann Gesellschaft*. Hamburg, 14-33 avec 11 fig.

LEIDEN. *Rijks-Museum van Oudheden. Egyptische Kunst en beschaving in's Rijks-Museum van Oudheden. Gids voor de Egyptische Afdeling*, Le Haye, 1926. Le volume XII de la grande publication (1925) est l'objet d'un compte-rendu par T. G. ALLEN, dans *Amer. Journ. of Semit. Lang.*, XLII, 1926, 69-72. W. D. VAN WYNGAARDEN publie le volume XIII: *Lijkcazen en lijkcazenkisten*, reproduisant et décrivant les canopes et les coffres à canopes.

LOUVRE. CH. BOREUX, *Antiquités égyptiennes*, dans *Beaux Arts*, IV, 1926, 261-2, 3 fig.

MOSCOU. *Musée de Moscou*, I, no. 2, 1926, Moscou (en russe), 8-10 et 3 ill.: acquisitions nouvelles de la section égyptienne.

NEW YORK. M. LAMBRINO, *Enrichissements des musées de New York et de Cleveland*, dans *Beaux Arts*, IV, 1926, 107; A. LANSING, *An Old Kingdom scribe*, dans *Bulletin of the Metropolitan Museum of Art*, XXI, 1926, 38-43, 2 fig.; A. M. LYTGHOE, *A Gift to the Egyptian Collection*, *ibid.*, 4 et 6, 2 fig.

PHILADELPHIA. *The Eckley Brinton Cox Junior Egyptian Wing*, dans *The Museum Journal*, Philadelphia, XVII, 1926, 101-27 et 13 pl.

TURIN. G. DI CASAMICHELÀ, *Eerst eeuwfeest van het Egyptische Museum te Turijn*, dans *Opgang*, IV, 1926, 594-600, article sur le jubilé centenaire du musée de Turin.

Ventes de Collections. Plusieurs collections ont été dispersées en 1926 chez Sotheby: *Catalogue of the Collections formed by the late Lord Carmichael of Skirling* (8 juin et s.); *Catalogue of the palaeolithic implements, Egyptian, Greek, Cypriot and Roman antiquities...the property of John Bateman* (21 juin); *Catalogue of Egyptian, Greek, Roman, Cypriot and Indian antiquities, etc., comprising Egyptian objects, collected by Mrs John Gurston* (22 juillet et s.); *Catalogue of Egyptian, Babylonian, Greek and Roman antiquities formed by Baron Nugent...now the property of Lord Vernon* (16 décembre et s.).

Trois ventes à l'Hôtel Drouot à Paris méritent d'être signalées, surtout la première: *Catalogue des antiquités égyptiennes, grecques et romaines...provenant du Cabinet de curiosités de C. L. F. Panckoucke* (25 mars); *Catalogue des antiquités égypto-phéniciennes, grecques et italiotes...provenant de l'ancienne collection Knight* (3 juin); *Catalogue des antiquités égyptiennes, grecques et romaines* (6 et 7 décembre). On trouvera des détails sur le Cabinet Panckoucke dans le *Figaro illustré* des 20 et 27 mai 1926, 506-7 et 522, 3 fig.

Art. Répondant au goût d'un public toujours plus nombreux, les ouvrages d'art égyptien se multiplient: CH. BOREUX, *L'Art Égyptien*, Paris, 1926. Compte-rendus de CONTENAC, dans le *Mercur de France*, 1926, 216-18; *Ancient Egypt*, 1926, 92.

JEAN CAPART, *L'Art Égyptien. Études et Histoire*, I, est analysé par W. WOLF, *Deutsche Literaturzeitung*, 1926, col. 762-3. Le recueil *Architecture* du même par S. A. B. MERCER, dans *Journ. Soc. Oriental Research*, X, 1926, 216-17.

L. CURTIUS, *Antike Kunst, I. Aegypten und Vorderasien*, est l'objet d'articles par W. VON BISSING, dans *Berliner Philol. Wochenschrift*, XLVI, 1926, col. 56-66, et R. MOUTERDE, dans *Mélanges de l'Université St Joseph*, XI, 1926, 37-6.

Le petit livre de HERMANN KEES, *Aegyptische Kunst*, Breslau, 1926, est très bien fait et plein de remarques fort justes. Par contre HENRY MARTIN, *L'Art égyptien, l'Art assyrien, l'Art perse* (La Grammaire des Styles), Paris, 1926, est sans valeur réelle.

Quelques très belles planches d'art égyptien sont à signaler dans GEORGE KOWALCZYK, *Decorative Sculpture, with an introduction by A. Koster*, Londres, 1926.

Signalons la nouvelle édition (avec un chapitre supplémentaire) de FLINDERS PETRIE, *Les Arts et Métiers dans l'ancienne Égypte*, traduit par JEAN CAPART, Bruxelles, 1926.

A. A. QUIBELL, *Egyptian History and Art*, est l'objet d'un compte-rendu par G. RÖDER, dans *O.L.Z.*, XXIX, 1926, 254-5; H. SCHAFER et W. ANDRAE, *Die Kunst des alten Orients*, par N. DE GARIS DAVIES, dans *O.L.Z.*, XXIX, 1926, 122-5 et par A. SCHARFF, dans *Der Cicerone*, XVIII, 1926, 546-7; ANTON SPRINGER, *Die Kunst des Altertums* (édit. 1923), par L. CURTIUS, dans *O.L.Z.*, XXIX, 1926, 117-22; F. W. v. BISSING,

De Oostersche Grondlag der Kunstgeschiedenis (1925), par ROBERT HEIDENREICH, dans *Archiv für Orientforschung*, III, 1926, 83-4; H. SCHAFER, *Grundlagen der ägyptischen Rundbildnerie* (1923), par H. WOLFF, dans *O.L.Z.*, XXIX, 1926, 31-4.

FERNAND VAN GOETHEM, *Het Zinnebeeld in de Kunst et De Symbolen der Mythologie in de egyptische Kunst*, Anvers, 1926 (autographié), ne sont guère que d'ingénieuses rêveries.

Art d'El-Amarna. JAMES BAIKIE, *The Amarna Age. A Study of the crisis of the ancient world*, Londres, 1926, donne une excellente idée d'ensemble du problème de l'art d'Aménophis IV dans son cadre historique. On lira avec un vif intérêt l'étude spéciale de H. SCHAFER, *Das Wesen der "Amarnakunst"*, dans *Mitteilungen der deutschen Orient-Gesellschaft*, no. 64, 1926, 56-61, pls. ii-v. Voir sur les étranges têtes de Karnak, une courte note de S. REINACH dans *Revue archéologique*, XXIII, 1926, 129.

G. BÉNÉDITE, *Sur une tête de princesse d'Akhounaten*, dans *Monuments Piot*, XXVII, 1926, 113-18, pl. xi, édite la remarquable tête acquise par le Louvre. La petite pièce en pâte de verre publiée par le même auteur (*Rec. de l'Égypte Ancienne*, I, 1925) est appréciée dans *Ancient Egypt*, 1926, 59.

H. SCHAFER, *Kopf einer Königin aus Amarna*, dans *Hauptwerke aus den Staatlichen Museen zu Berlin, Agypt. Abt.*, pl. 5, édite un des plus fins morceaux de la série.

La statuette trouvée par l'Egypt Exploration Society et attribuée au Musée de Brooklyn est publiée par TH. WHITTEMORE, *A Statuette of Akhenaten*, dans *Recueil d'études dédiées à la mémoire de N. P. Kondakov*, 1926, 259-62 et pl. xxix.

Ce n'est pas sans plaisir que l'on étudie la publication de CLARA SIEMENS et GRETHE AUER, *König Echnaton in El-Amarna*, 1926, 16 pl., dans laquelle les auteurs ont essayé de nous donner la vision de la capitale d'Aménophis IV.

Tombe de Toutankhamon. Le Musée du Caire édite une *Notice sommaire sur les objets provenant de la tombe de Toutankhamon actuellement exposés au Musée du Caire par l'administration du Musée avec traduction anglaise: A short description of the objects from the tomb of Tutankhamun now exhibited in the Cairo Museum published by the Museum authorities*.

Illustrated London News, no. 4550 du 3 juillet et no. 4552 du 17 juillet, et *l'Illustration*, de Paris, nos. du 6 février et du 3 juillet, donnent des photographies des cercueils et des bijoux. Voir aussi W. WOLF, *Zur Öffnung des Sarges Tutanchamons*, dans *Illustrierte Zeitung*, no. 4226, 11 mars 1926, 319-21 et fig.

CH. BOREUX, *Les découvertes récentes au tombeau de Toutankhamon*, dans *Beaux Arts*, IV, 1926, 77-8; *Toutankhamon (La découverte du tombeau de)*, dans *Larousse mensuel illustré*, no. 232, juin 1926, 157-8, 2 fig.; RENÉ LA BRUYÈRE, *Une Visite à Tout-ank-Amon*, dans *Revue des deux mondes*, XCVI, 1926, 921-30, et *Tut-ank-Amons Grab*, dans *Archiv für Orientforschung*, III, 1926, 201: trois articles seulement; l'intérêt pour la fameuse découverte a subi un moment d'arrêt.

Architecture. F. W. VON BISSING, *Zur Geschichte der "roten Nischen" in El Amarna*, dans *Archiv für Orientforschung*, III, 1926, 174-6, explique les niches dites "décoratives" des maisons d'El Amarna, comme étant le lieu du culte domestique. (Voir mes *Leçons sur l'Art Égyptien*, p. 288.)

La nouvelle édition de M. L. GOTHEIN, *Geschichte der Gartenkunst. I. Von Aegypten bis zur Renaissance in Italien, Spanien und Portugal*, Jena, 1926, contient une importante étude sur les jardins égyptiens.

Nombreux compte-rendus: d'E. BAUMGARTEL, *Dolmen und Mastaba*, par TH. DOMBART, dans *Hist. Jahrb.*, XLVI, 1926, 443 et s., par T. ERIC PEET, dans *Journal*, XII, 1926, 321-2; de H. BONNET, *Zur Baugeschichte des Mentuhoteptempels*, et de N. DE G. DAVIES, *The Place of audience in the palace*, par L. B. ELLIS, dans *Ancient Egypt*, 1926, 30; de G. JÉQUIER, *L'Architecture et la décoration dans l'Ancienne Égypte*, par P. MONTET, dans *Revue des Études anciennes*, XXVIII, 1926, 59-61; id., *Manuel d'archéologie égyptienne. Les éléments de l'Architecture*, par P. MONTET, *ibid.*, XXXVIII, 1926, 66-7, par A. BAUDRILLART, dans *Larousse mensuel*, avril 1926, 90-1, par A. VAN GENNEP, dans *Mercure de France*, 1926, 471-3.

H. LACOSTE, *Une Leçon du passé pour le temps présent*, dans *L'Émulation*, Bruxelles, XLVI, 1926, 145-53, avec 15 ill., est un compte-rendu par un architecte de J. CAPART, *Thèbes. Lu Gloire d'un grand passé*.

Citons une étude de vulgarisation de M. WERBROUCK, *La Maison égyptienne*, dans *La Femme belge*, no. 10, mai 1926, 739-45.

Nous devons à E. A. WALLIS BUDGE un ouvrage d'ensemble sur la question des obélisques: *Cleopatra's Needles and other Egyptian Obelisks*, Londres, 1926, XXIV, 308 pp., 17 pl. et 22 fig.

Pyramides. L. BORCHARDT a publié un important travail sur les dimensions réelles et l'orientation de la grande pyramide de Gizeh: *Langen u. Richtungen der vier Grundkanten der grossen Pyramide bei Gise*.

Mit Bemerkungen über d. Besucherinschriften an d. Pyramide v. E. Mittwoch u. E. Sittig, Berlin, 1926. Quelques remarques sur l'article de R. ENGELBACH, *On the Size and Orientation of the Great Pyramid*, dans *Ancient Egypt*, 1926, 56.

O. GILLAIN, *La Grande Pyramide d'Égypte*, Bruxelles (Collection l'Eglantine, no. 12), est une petite brochure de vulgarisation d'une lecture très intéressante.

E. BOISACQ, *Brevel d'étymologies*, dans *Recue de l'Université de Bruxelles*, xxxii, 1926, 79-81, présente une étymologie du mot pyramide.

Quelques ouvrages à ajouter à la bibliographie déjà si copieuse de la "Religion de la Pyramide": CH. LAGRANGE, *La Chronologie égyptienne de Manéthon et sa concordance de fait avec la chronologie littérale du texte hébreu de la Bible* (Extrait du tome III des *Leçons sur la Parole de Dieu*), Bruxelles, 1926; "DISCIPULUS," *The Great Pyramid: its construction, symbolism and chronology. With a foreword by D. Davidson*, Londres, 1926; EDGAR MORTON, *The Great Pyramid: 1914 A.D. and the Great Pyramid. I. Its scientific features. II. Its time features. III. Its spiritual symbolism*, Londres, 1926.

Tombes. F. W. VON BISSING, *Zwei Gräber eines Toten*, dans *Zeitschr. f. äg. Spr.*, LXII, 1926, 65, exprime le vœu de voir quelqu'un étudier en détail le problème des "deux tombes" pour un seul mort. Dans la sagesse d'Amenemope le sage est dit avoir une pyramide à Panopolis et un hypogée en Abydos.

La belle édition de la Tombe des deux Sculpteurs à Thèbes par N. DE G. DAVIES est louée par H. R. HALL, dans *The Burlington Magazine*, XLIX, 1926, 249 et S. A. B. MERCER, dans *Journ. Soc. Oriental Research*, x, 1926, 215-16. L'ouvrage de G. LEFEBVRE sur le tombeau de Petosiris est l'objet de notes par P. MONTET, dans *Recue des Études anciennes*, xxviii, 1926, 61-3 et CH. PICARD, *Sculptures d'Égypte*, dans *Revue des Études grecques*, 1926, 156-7.

G. RÖDER décrit le mastaba transporté de Gîzah à Hildesheim: *Die Grabkammer des Chemka im Pelizaeus-Museum zu Hildesheim*, dans *Alt-Hildesheim*, no. 7, nov. 1926, 55-66 et fig. Une courte note de H. T. signale *La Chambre sépulcrale du prince Canjajsouti au Musée de Vienne*, dans *L'Amour de l'Art*, Paris, 1926, 36, ill.

H. F. LUTZ, *Lintel and Jamb of the Hypogeum of Sn-ndm*, dans *Oriens*, I, 2, 1926, 17-20, 6 fig., publie des fragments arrivés au Musée de San Francisco de la célèbre tombe de Sen-nedjem à Dêr el-Medinah.

DOWS DUNHAM, *Two Royal Ladies of Meroe*, est l'objet d'un compte-rendu par E. B. dans *The Burlington Magazine*, XLVIII, 1926, 161.

W. D. VAN WYNGAARDEN publie et commente *Een stele van Horemheb* dans *Oudheidkundige Mededeelingen uit 's Rijksmuseum van Oudheden te Leiden*, VII, 1926, 1 fig.

Momies et cercueils. Le grand ouvrage d'E. J. SMITH et W. R. DAWSON est annoncé par S. A. B. MERCER dans *Journ. Soc. Orient. Research*, x, 1926, 104-5.

H. SCHÄFER publie un cercueil peint du Musée de Berlin, contenant une momie de serpent sacré: *Das Schlangensirgchen no. 7332 der Berliner ägyptischen Sammlung*, dans *Zeitschr. f. äg. Spr.*, LXII, 1926, 39-42, 4 fig.

On doit à A. WIEDEMANN l'édition détaillée d'un cercueil saite avec commentaires religieux aussi précieux qu'abondants: *Ein ägyptischer Sarg der Saitenzeit im akademischen Kunstmuseum zu Bonn*, dans *Bonner Jahrbücher*, 1926, 148-79, pls. iv et v.

Quelques curiosités: *Fragments de sarcophages égyptiens en carton peint et doré...provenant de l'ancienne collection de M. Dominos Pacha*, Hôtel Drouot, vente du 7 mai 1926; Revue des ventes du mois d'avril: Momie thébaine, dans *Figaro artistique*, 27 mai 1926, 523-4; CH. LELEUX et M. GOUINEAU, *Que révèle la radiographie d'une momie*, dans *Je sais tout*, Paris, no. 243, mars 1926, 32-6, no. 244, avril 1926, 93, figg.

Ouchabtis. L. B. ELLIS, dans *Ancient Egypt*, 1926, analyse F. F. GESS, *Ushabti and sarcophagi in the Hermitage Museum*; P. MONTET, dans *Recue des Études anciennes*, xxviii, 1926, 64-6, fait le compte-rendu de L. SPELEERS, *Les Figurines funéraires.* H. GAUTHIER, *Note sur les statuètes funéraires trouvées dans les tombes de Tehneh*, dans *Ann. Serv.*, xxvi, 1926, 41-3, apporte une intéressante contribution à l'étude du nombre de statuètes déposées dans une même tombe.

Reliefs. G. DE VIANNA KELSCH croit être le premier qui ait découvert la loi d'isocéphalie dans les reliefs égyptiens: *Aplicações praticas do canon Tiburtius na rectificação de erros tradicionais*, dans *Boletim do Instituto Brasileiro de Ciências* (Rio de Janeiro), I (1925), no. 3; II (1926), nos. 2, 4, 5; III (1927), no. 1, avec nombreuses figures.

H. SCHÄFER, *Die angebliche Entstehung der ägyptischen Wandbilder aus Wandbehang*, dans *Deutsche Literaturzeitung*, III, 1926, 1879-86, fig., rejette l'idée que les reliefs des tombes seraient la copie de tapisseries.

CH. BOREUX, *Un bas-relief au nom d'une princesse royale de la IV^e dynastie*, est résumé dans *Ancient Egypt*, 1926, 59. PIERRE MONTET, *Les Scènes de la vie privée*, est l'objet de plusieurs compte-rendus: de J. CAPART, dans *Revue belge de philologie et d'histoire*, v, 1926, 1050-2; de S. A. B. MERCER, dans *Journ. Soc. Orient. Research*, x, 1926, 105-6; de T. ERIC PEET, dans *Liverpool Annals*, XIII, 1926, 97.

H. SCHÄFER, *Zwei Flachbildnisse: Bildnis des Besitzers eines Grabes der Pyramidenzeit. Bildnis des Besitzers eines Grabes des Neuen Reiches*, dans *Hauptwerke aus den Staatlichen Museen zu Berlin*, Egypt. Abt., pl. ii, publie deux beaux reliefs du Musée de Berlin.

L. B. ELLIS, dans *Ancient Egypt*, 1926, 30, enregistre l'attribution par W. SPIEGELBERG du beau relief funéraire de Berlin, à l'époque d'Horemheb.

W. SPIEGELBERG, dans *Munchner Jahrb. d. bildenden Kunst*, N.F., iv, 1926, 126-8, attire l'attention sur un fragment de relief de Toutankhamon à mettre en relations avec les scènes peintes du coffret fameux. Il insiste sur le caractère égyptien de ces représentations où certains cherchent trop facilement une influence étrangère.

F. W. VON BISSING, *Ueber eine Grabwand aus Memphis in der Glyptothek Königs Ludwigs*, dans *Münchener Jahrbuch der bildenden Kunst*, N.F. I, 1926, 207-24, 4 fig., publie un remarquable fragment du tombeau du chef des artistes du Roi, Amenemih, au Musée de Munich, et un panneau du Kestner Museum de Hanovre. Il étudie longuement le thème de la déesse dans l'arbre auprès duquel viennent s'alimenter les morts et leurs âmes. H. P. BLOK, *Vijf Grafreliefs uit het nieuwe Rijk*, dans *Bulletin van de Vereeniging tot bevordering der kennis van de antieke beschaving*, Le Haye, I, 1926, 17-20, 3 fig., signale cinq fragments du tombeau du chef des orfèvres du temple de Sethi I^{er}, Sai-m-peter.

F. W. VON BISSING, *Das Verhältnis des Ibi-Grabes in Theben zu dem Ibi-Grabe von Dêr el-Gebrâwî*, dans *Archiv für Orientforschung*, III, 1926, 53-5, montre que le décorateur de la tombe thébaine d'époque saïte n'a pas copié la tombe plus ancienne de Dêr el-Gebrâwî, mais qu'il s'est servi sans doute des mêmes cahiers de modèles.

CH. DUGAS, *Bas Relief gréco-égyptien*, dans *Revue des Études grecques*, 1926, 264, se réfère à LEFEBVRE, dans *Monuments Piot*, XXV, pl. xvii. C. C. VAN ESSEN, *Hellenistisch Relief mit Processie voor Offer*, dans *Bulletin van de Vereeniging tot bevordering der kennis van de antieke beschaving*, I, 1926, 11-15, publie un relief à représentations égyptiennes de style gréco-italique.

Peinture. Les relevés exécutés par Mlle Baud, au cours de ses missions à Thèbes, ont été exposés avec grand succès à Paris, à Bruxelles et à Leyde: MARCELLE BAUD, *Documents d'art égyptien. Dessins de tombeaux thébains de la XVIII^e à la XXVI^e dynastie*. Musée des Arts décoratifs, janvier-février 1926. Voir CONTENAU, dans le *Mercur de France*, 15 mars 1926, 713-14; *Beaux Arts*, no. 2, 23-4, fig.; *Bulletin de l'Art ancien et moderne*, févr. 1926, 49; *Art et Décoration*, févr. 1926, Chronique, 1-2.

Le Metropolitan Museum édite séparément des planches coloriées des tombes thébaines: *Coloured reproductions of Egyptian Wall paintings*, 9 sujets différents.

Sculpture. G. RÖDER, *Die Vorgeschichtliche Plastik Aegyptens in ihrer Bedeutung für die Bildung des ägyptischen Stils*, dans *Ipek. Jahrbuch für prahistorische und ethnographische Kunst*, 1926, 64-84, pls. 25-31, étudie les débuts de la plastique en Égypte et cherche une fois de plus à établir des rapports entre le préhistorique de Haute Égypte et l'art pharaonique.

Le livre de Mme M. WEYNANTS-RONDAY, *Les Statues vivantes. Introduction à l'étude des statues égyptiennes*, cherche avant tout à répondre à la question: Pourquoi les Égyptiens faisaient-ils des statues? Compte-rendus dans *Pagina bibliographica*, I, 1926, 263; S. REINACH, dans *Revue archéologique*, XXIV, 1926, 291; P. SCHEBASTA, dans *Anthropos*, XXI, 1926, 1054-5; *Bulletin de l'Art ancien et moderne*, nov. 1926, 304.

H. SCHÄFER publie plusieurs sculptures d'animaux du Musée de Berlin: *Rundbild eines liegenden Löwen aus dem Beginn der geschichtlichen Zeit—Zwei Tierköpfe: Löwenkopf der Pyramidenzeit—Wolfkopf des Neuen Reiches*, dans *Hauptwerke aus den Staatlichen Museen zu Berlin*. Egypt. Abt., pl. I et 3; *Eine Statue des Schnumwidders aus der Zeit des Cheops*, dans *O.L.Z.*, XXIX, 723-7, pl. ii et 6 fig.

Dans L. VENTURI, *La Collezione Gualino*, I, pl. lii, est reproduit un groupe de famille d'ancien empire.

H. GAUTHIER, *Une Statuette antérieure à la XI^e dynastie*, dans *Ann. Serv.*, XXVI, 1926, 273-4, publie le texte gravé sur la base de la statue d'un Antef, appartenant depuis plusieurs années à un marchand de Thèbes.

H. FRANKFORT, *A Masterpiece of early middle Kingdom sculpture*, dans *Journal*, XII, 1926, 143-4, pl. xxi, met en valeur le fin morceau de sculpture découvert en Abydos et conservé maintenant à la Glyptothek de Copenhague.

À propos de l'arrivée au Louvre de sculptures royales trouvées à Medamûd on lira: G. BÉNÉDITE, *Encore Sésostriis III* (Débats du 3 janvier 1926), dans *Revue archéologique*, XXIII, 1926, 318-22; CONTENAU, dans le *Mercure de France*, 15 mars 1926, 714-15; *Art and Archaeology*, XXII, 1926, 196.

H. SCHÄFER publie une tête royale et une statue de Reine du Musée de Berlin: *Ein Königskopf des mittleren Reiches—Standbild einer Königin der Spätzeit*, dans *Hauptwerke aus den Staatlichen Museen zu Berlin*, Aegypt. Abt., pls. iv et vi.

G. A. WAINWRIGHT, *Statue of Horus son of Khehu*, est analysé dans *Ancient Egypt*, 1926, 57.

Signalons enfin *Egyptian urgonite bust of a priestess*, dans *The Antiquarian Quarterly*, I, 1926, 237, et 1 pl.

Agriculture. Le livre de F. HARTMANN, *L'Agriculture dans l'ancienne Égypte* (1923), est signalé dans *Bulletin bibliographique et pédagogique du Musée Belge*, XXX, 1926, 30. A. BERNARD étudie *La charrue en Égypte*, dans *Congrès international de Géographie*, Le Caire, 1925, IV, 283-93; *An ancient Egyptian hoe recently found in the Tomb of Akhenaten's grand vizier, Ramose, at Thebes*, est reproduite in *The Illustrated London News*, no. 4534, 13 mars 1926, 464.

Armes. H. BONNET a consacré une étude à l'armement des peuples de l'ancien Orient. *Die Waffen der Völker des Alten Orients*, Leipzig, 1926.

MALLON, *Une Hache égyptienne trouvée en Syrie*, est signalé par J. FORGET dans *Le Muséon*, XXXIX, 1926, 374-5; G. A. WAINWRIGHT, *A dagger of the early New Kingdom*, est résumé dans *Ancient Egypt*, 1926, 55.

Bateaux. A. KÖSTER nous donne une étude d'ensemble sur la navigation maritime égyptienne: *Seefahrten der alten Aegypten*, Berlin, 31 pp. et 100 fig. Le mémoire du même auteur. *Schiffahrt und Handelsverkehr des ostlichen Mittelmeers in 3. u. 2. Jahrt. v. Chr.*, 1924, est l'objet de compte-rendus par A. CALDERINI, dans *Aegyptus*, VII, 1926, 335, et E. BUX, dans *Hum. Geogr.*, XXXVII, 1926, 128. CH. BOREUX, *L'Art de la navigation en Égypte*, est l'objet de remarques intéressantes dans *Ancient Egypt*, 1926, 90-1.

Palettes en schiste. H. RANKE, *Eine Bemerkung zur "Narmer"-Palette*, est résumé par J. FRIEDRICH dans *O.L.Z.*, XXIX, 1926, 631; voir HEHN, dans *Deutsche Literaturz.*, 1926, 993-6. H. RANKE, *Alter und Herkunft der ägyptischen "Loewenjagd-Palette"*, est analysé par L. B. ELLIS dans *Ancient Egypt*, 1926, 93. L. KEIMER, *Bemerkungen zur Schiefertafel von Hierakonpolis*, dans *Aegyptus*, VII, 1926, 169-88, pls. II-IV, confirme par ses études indépendantes les résultats démontrés par H. Ranke.

Sceaux. *Ancient Egypt*, 1926, pp. 29, 30, 68-9, 116-19, analyse N. D. FLITTNER, *Egyptian Cylinders of the Golénichef Collection*, MAX PIEPER, *Die ägyptischen Skarabäen und ihre Nachbildungen in den Mittelmeerländern*, et publie M. MATTHIEU, *Some Scarabs from the South of Russia*, et V. STRUVE, *Egyptian Sealings in the Collection of the Academician N. P. Likhatchev*.

Vêtements. LÉON HEUZÉY, *Le Costume oriental dans l'antiquité. I. Le Costume égyptien*, dans *Gazette des Beaux Arts*, XIV, 121-30, 6 fig., n'est qu'une introduction à l'étude du vêtement égyptien. Le mémoire de C. H. JOHL, *Altägyptische Webstühle*, est analysé par H. BONNET dans *Deutsche Literaturz.*, III, 1926, 1007.

Arts industriels. A consulter les deux ouvrages généraux de H. SCHMITZ, *The Encyclopaedia of furniture et Das Möbelwerk*, Berlin, 1926, pls. I-VII, M. WERBRUCK a consacré un article sur *Le Mobilier*, dans *La Femme belge*, 1926, 75-84.

Les scènes gravées sur le vase de Basta et découvertes par C. C. EDGAR, *Ann. Serv.*, 1925, sont analysées dans *Ancient Egypt*, 1926, 57. Le catalogue de Mrs. C. RANSOM WILLIAMS est l'objet de compte-rendus par F. W. VON BISSING, dans *Berliner Philol. Wochenschrift*, XLVI, 1926, 97-100, et A. ERMAN, dans *D. Liter.*, XLVI, 1926, no. 23. Signalons un article de vulgarisation de TEODORO N. MICHANO, *Joyeria Egipcia*, dans *Rivista del Ateneo*, III, 1926, 93-8, fig.

L. FRANCHET, *La céramique du désert libyque*, dans *Revue scientifique illustrée*, 1926, 724-5, ill., discute l'origine égyptienne possible des céramiques du nord de l'Afrique. H. FRANKFORT, *Studies in Early Pottery*, est analysé par BURROWS dans *Journ. Royal Asiatic Soc.*, 1926, 319-21.

The Antiquarian Quarterly, 1926, 178, pl. xvii, reproduit les *Wine Jars of the Lady Em-Netchem* de l'ancienne collection MacGregor.

W. D. VAN WYNGAARDEN étudie des vases égyptiens en pierre: *Quel ägyptisch steenen vaatwerk*, dans *Oudheidkundige Mededeelingen uit's Rijksmuseum van Oudheden te Leiden*, VII, 1926, pp. lxxix-lxxxiv, fig.

Divers. ROBERTO ALMEGIA, *L'Opera degli italiani per la conoscenza dell'Egitto e per il suo risorgimento civile ed economico*, I, Rome, 1926, contient des chapitres intéressants d'E. BRECCIA, *L'Esplorazione archeologica*, d'A. CALDERINI, *Gli studi papirologici* et de G. FARINA, *Le Indagini sulle lingue e sulla storia del antico Egitto*. Compte-rendus dans *Bulletin de la Société archéologique d'Alexandrie*, XXII, 1926,

247-8; C. CESARI, dans *Rivista Coloniale*, XXI, 1926, 394; A. CALDERINI, dans *Aegyptus*, VII, 1926, 321-2.

Les petits livres d'E. C. BANCK, *Aegyptische Kultur* et *Aegyptische Leben*, Leipzig, 1926, dont l'idée est si bonne, sont défigurés par une illustration qui date d'il y a trois quarts de siècle.

A. M. BLACKMAN, *Das Hundert-Torige Theben. Hinter den Pylonen der Pharaonen*. Uebersetzt von G. RÖDER, Leipzig, 1926, est annoncé par K. ANTHES dans *Liter. Wochenschrift*, II, 1926, 521.

Dans EV. BRECCIA, *Monuments de l'Égypte gréco-romaine publiés par la Société archéologique d'Alexandrie*, I, 1926, on trouvera plusieurs monuments pharaoniques importants découverts à Canope.

Le livre d'E. A. W. BUDGE, *The Dwellers on the Nile*, a paru en une nouvelle édition, Londres, 1926, XXXI, 326 pp. avec 11 pl. et fig.

G. DARESSY publie *Le voyage d'inspection de M. Grébaut en 1889* dans *Ann. Serv.*, XXVI, 1926, 1-22.

R. HALLO, *Ueber einige Antikenfälschungen und Nachbildungen im Casseler Museum*, dans *Repositorium für Kunstwissenschaft*, XLVII, 1926, 265-83, s'occupe aussi d'objets égyptiens.

L'ouvrage important de FLINDERS PETRIE, *Ancient Egyptian* (Descriptive Sociology, 1925), est l'objet d'un compte-rendu de G. W. ELDERKIN, dans *American Journal of Archaeology*, XXX, 1926, 480-1. Les instructives listes de titres publiées par le même auteur dans *Ancient Egypt*, 1926, 15-23 et 73-84, portent sur *Professions and trades* et *Supplies and defence*.

M. W[ERBROUCK] a édité un album sur *Thèbes. La Gloire d'un grand passé expliquée aux enfants*.

Enfin l'*Atlas zur altägyptischen Kulturgeschichte* de W. WRESZINSKI est l'objet de compte-rendus de S. A. B. MERCER, dans *Journ. Soc. Orient. Research*, X, 1926, 216 et 322, et de M. LÖHR, dans *Theologische Literaturzeitung*, LI, 1926, no. 8.

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G. GABRIELI, *Per la storia dell' Egittologia e scienze affini. Carteggio inedito de I. Rosellini e L. M. Ungarelli, epitomato ed illustrato da G. G. con i ritratti dei due egittologi*, Rome, 1926, et G. GABRIELI et I. GUIDI, *Lettere egittologiche inedite di Champollion le Jeune*, dans *Rendiconti d. Reale Accad. dei Lincei*. Classe di Scienze morali, 1926, 21-48, apportent de précieux documents pour l'histoire des débuts de l'égyptologie.

G. *Bénédite*. CH. BOREUX, dans *Larousse mensuel illustré*, no. 232, juin 1926, 142-3; P. JAMOT, dans *Revue archéologique*, XXIV, 1926, 73-5; A. L., dans *Beaux Arts*, IV, 1926, 100; *Art et Décoration*, avril 1926 Chronique, 1; *Bulletin de l'Art ancien et moderne*, no. 728, mai 1926, 147.

L. *Boulard*. Nécrologie par O. MARTIN, dans *Revue historique de droit français et étranger*, janv.—mars 1926.

Aaron *Ember*. F. R. BLAKE dans *Journal American Oriental Society*, XLVI, 1926, 182-4.

E. *Naville*. J. B. CHABOT, dans *Compte-rendus de l'Académie des Inscriptions*, 1926, 246-9; R. D[US-SAUD], dans *Syria*, VII, 1926, 421; M. BOULE, dans *L'Anthropologie*, XXXVI, 1926, 600; *Ancient Egypt*, 1926, 128.

Valdemar *Schmidt*. M. BOULE, dans *L'Anthropologie*, XXXVI, 1926, 168; *American Journal of Archaeology*, XXX, 1926, 341.

Georg *Schweinfurth*. J. BALL, *Schweinfurth and the cartography of Egypt*, dans *Bull. Soc. Royale de Géographie d'Égypte*, XIV, 1926, 139-44; P. BOVIER-LAPIERRE, *Schweinfurth et les sciences biologiques*, *Schweinfurth et la préhistoire*, *ibid.*, 145-52 et 153-60; R. CHODAT, dans *Le Globe*, LXV, 1926, 41; H. DETZNER, dans *Geogr. Zeitschrift*, XXXII, 1926, 281-3; H. FROIDEVAUX, dans *Larousse mensuel illustré*, VII, 1926, 260; H. GATHIER, *Schweinfurth et l'archéologie égyptienne*, dans *Bull. de la Société Royale de Géographie d'Égypte*, XIV, 1926, 129-33; S. H., dans *Sudan Notes and Records*, VIII, 1926, 243-5; W. F. HUME, *The Contributions of Dr. Schweinfurth to the knowledge of Egyptian geology*, dans *Bulletin de la Société Royale de Géographie d'Égypte*, XIV, 1926, 135-7; L. KEIMER, *Bibliographie des ouvrages de G. Schweinfurth*, *ibid.*, 73-112; H. MUNIER, *Notice biographique (1836-1925)*, *ibid.*, 65-72 et 2 portraits; A. OSBORNE, dans *Bulletin de la Société archéol. d'Alexandrie*, XXII, 1926, 240-4; S. REINACH, dans *Revue Archéologique*, XXIII, 1926, 124. Réimpression de G. SCHWEINFURTH, *Discours prononcé au Caire à la séance d'inauguration, le 2 juin 1875*, dans *Bulletin de la Société Royale de Géographie d'Égypte*, XIV, 1926, 113-27.

VARIA.

Signalons les importants travaux de Miss S. W. BLACKMAN sur l'éthnographie de l'Égypte moderne: *The Karin and Karineh*, dans *Journ. of the Royal Anthropol. Inst.*, LVI, 1926, 163-9, 1 fig. et pl. xiv; *A Fertility rite in modern Egypt*, dans *Man*, XXVI, 1926, 113; *Some social and religious Customs in modern*

Egypt, with special references to survivals from Ancient Times, dans *Bulletin de la Société Royale de Géographie d'Égypte*, XIV, 1926, 41-6, 4 pls. Deux compte-rendus d'A. KENNETT, *Bedouin Justice*, ont été écrits par D. N., dans *Sudan Notes and Records*, IX, 1926, 140-2 et TH. ARNOLD, dans *Asiatic Review*, XXII, 1926, 71.

Voici de la littérature sur l'Égypte ancienne: LÉON BARRY, *La Dernière Épousée d'Ammon*, Paris, 1926; A. E. PHILLIPS, *Akhnuton. A Play*, Londres, 1926; G. DE LA FOUCHARDIÈRE, *A la recherche d'un dieu*, Paris, 1926; L. LAMPREY a écrit sous deux titres différents une jolie histoire d'enfants: *Children of Ancient Egypt* et *Long Ago in Egypt*, Boston, 1926; E. RAWLINS, *The hidden treasures of Egypt: a Romance*, New York, 1926. Une poésie sur un mastaba: M. T. RITTER, *Within the mastaba of an Egyptian Princess*, dans *Art and Archaeology*, XXII, 1926, 193.

D'autres romans: C. W. LEADBEATER, *Glimpses of Masonic History* et *The Hidden Life in Freemasonry*, Adyar, Madras, 1926; E. M. STEWART, *Symbolism of the Gods of Egypt and the light they throw on Freemasonry*, Londres, 1926. À noter: J. GATTEFOSSE et C. ROUX, *Bibliographie de l'Atlantide et des questions connexes*, Paris, 1926.

J'ai relevé aussi: H. F. LUTZ, *The Analysis of the Egyptian Mind*, dans *Oriens. The Oriental Review*, I, 1926, 19-21; L. KEIMER, *Die Angst der Ägypter vor der Wüste*, dans *Hamburger Fremdenblatt*, 6 janv. 1926; A. H. FORSTER, *Sidelights on the life of an Egyptian working man in the days of Jesus of Nazareth*, dans *Anglican Theol. Review*, 1926, 24-8.

B. MICHEL, *Le Folklore dans le Nihayat al Arab de Nowayri, encyclopédie arabe du XIV^e siècle*, recueille des légendes relatives à quelques anciens monuments, les pyramides et les temples dans *Congrès international de Géographie*, Le Caire, 1925, IV, 1926, 239-42.

Citons enfin: *Antiquités et temps modernes. A bord du Mariette pacha*, dans *Revue de l'Art*, décembre 1926, 1-16.

La destinée de toute Bibliographie est d'être ennuyeuse, et il est à craindre même qu'elle le soit dans la proportion où elle vise à être complète. Je crains que celle-ci paraisse presque un modèle du genre¹. Si cependant le travail qu'elle m'a coûté peut dispenser d'autres de faire des recherches fastidieuses et souvent inutiles, je n'aurai pas perdu mon temps.

Me permettra-t-on en terminant d'attirer une fois encore l'attention sur la *Fondation Égyptologique Reine Élisabeth* dont la *Chronique d'Égypte* est le Bulletin périodique (5 numéros ont paru)? Nous nous efforçons de réunir tout ce qui se publie sur l'Égypte, depuis l'époque paléolithique jusqu'à l'époque arabe (celle-ci exclue). Nous demandons instamment aux auteurs de nous envoyer *toutes* leurs publications, soit à titre d'hommage, soit contre paiement dès la réception. En répondant à mon appel, ils aideront en même temps à la rédaction de la Bibliographie du *Journal of Egyptian Archaeology*. L'adresse de la Fondation Égyptologique est: Musées Royaux du Cinquantenaire à Bruxelles.

JEAN CAPART.

¹ Je tiens à marquer les services rendus à cette bibliographie par l'*Orientalistische Literaturzeitung*, dont les dépouillements de revues sont éminemment précieux. Le travail de préparation sur fiches est l'œuvre de Mr. G. Bovy, bibliothécaire de la Fondation Égyptologique Reine Élisabeth.

NOTES AND NEWS

Although no excavation is being carried on this winter at Tell el-'Amarnah, the work on the temple of Seti I at Abydos continues. Miss Calverley has proved an able draughts-woman, and her copies of the reliefs and inscriptions are regarded by those who have seen them as highly satisfactory. She has gone to Abydos in order to compare the copies made in this country with the original scenes, and also, with the help of Dr. Heathcote, to take further photographs which were found necessary to complete the series. Dr. Gardiner visited the camp at Abydos early this year and reported most favourably upon the progress of this important undertaking. The Society is greatly indebted to Dr. Heathcote for devoting part of his vacation to the work.

Lack of funds is seriously hampering the activities of the Society, and, unless substantial donations are forthcoming, its publications, as well as its excavations, will have to be considerably curtailed.

The lectures of the series announced in our last number have all been well attended, and our thanks are due to the Council of the Royal Society for the use of the Lecture-Room. One change was made in the list; Mr. Norman H. Baynes asked to be allowed to withdraw his lecture owing to considerable pressure of work, and Mr. Bell therefore kindly consented to lecture in his place on St. Athanasius; he gave an exhaustive account of the life and influence of the saint, introducing several new facts concerning him recently discovered in a papyrus in the British Museum.

Although it is impossible to publish these lectures *in extenso*, some of the more important of the newly discovered facts will be published from time to time in the form of short articles in the *Journal*. Thus points from the lectures given by Dr. Hall, Mr. Glanville and Dr. Frankfort are expected to appear in due course.

The Society is concentrating on publications this year, since the interruption of the excavation work provides an opportunity for completing various tasks which have fallen into arrear. The Newton Memorial volume, *The Mural Paintings of Tell el-'Amarnah*, is in active preparation, and if the various contributors send in their manuscript as promised it ought to be ready by the autumn. Messrs. Emery Walker have already finished some of the magnificent coloured plates which will form an outstanding feature of the volume. A subscription list has been opened at the office, the cost before publication being £3. 3s. 0d.; after publication it will be increased to £4. 4s. 0d.

The Cenotaph of Seti I (Osireion) will be a substantial and important addition to the series of excavation memoirs. Besides the treatment of the architectural features, and of the much discussed purpose of the building, it is mainly the preparation of the numerous and extensive texts which makes the publication of this monument such a laborious task. Dr. Frankfort hopes, however, to have the work ready in manuscript before he leaves for Tell el-'Amarnah next autumn, so that the volume should be in the hands of subscribers in 1929.

The results of the cemetery work at Abydos, carried out as a secondary task during the winter of 1925-26, are ready for publication in the *Journal* in two or three instalments. Dr. Frankfort is also working up the results of last season's work at El-'Amarnah, but this will not be published until the remainder of the northern portion of the site has been excavated, so that it may appear as a whole. The final report on the North Palace will be included in this volume, which will, presumably, form the third part of the *City of Akhenaten*, Professor Griffith's work at El-'Amarnah forming Part II. Thus it will be seen that this year promises to be productive, although no excavations are being carried on.

The Graeco-Roman Branch has just issued *Oxyrhynchus Papyri XVII*, an important volume and well up to the standard of this invaluable series. Volume I of Mr. J. G. Tait's *Ostraca*, which includes all those of the Ptolemaic period in the Bodleian Library and several other collections, is now passing through the press. Volume II will contain those of the Roman and Byzantine period and the indices. It is, however, expected that between the publication of these two volumes the Society will bring out a volume prepared by Mr. Johnson and Professor Hunt, containing the important Theocritus papyrus found by the former, and some smaller fragments.

Egyptologists will learn with deep regret the death of Ernesto Schiaparelli, which took place, after a short illness, on February 14th. Schiaparelli, son of the historian Luigi, and cousin of the astronomer Giovanni, had been for many years past Director of the Egyptian Museum at Turin, and all those who have worked there will remember his kind and courteous manner, even during recent years when he was often visibly suffering.

He was a pupil and follower of Maspero, to whose generation he belonged rather than to the younger. His greatest contribution to his subject was his well-known *Libro dei funerali*. He was in charge of the Italian Expedition to Egypt of 1903-20 and worked at K̄au, at Heliopolis and in the Valley of the Queens at Thebes, where he discovered the untouched tomb of the engineer Kha the contents of which form the chief glory of the Turin Museum. During the last few years he had been engaged on the publication of these excavations, and two magnificent volumes had actually appeared, the second less than a year before his death. It is greatly to be hoped that the completion of the work from the notes and records which he has doubtless left behind will not be long delayed.

Schiaparelli was not only an Egyptologist but a Senator of the National Parliament, a great lover of his country and advancer of her prestige, and, last but not least, one of the central figures in the Italian missionary world. As a colleague of his has well said: "Grande, dotto ed umile italiano. Questo fu lo Schiaparelli."

The new fount of hieroglyphic type devised by Dr. Alan Gardiner primarily for the printing of his Egyptian Grammar has already been referred to in these Notes. In order to facilitate its use Dr. Gardiner has now issued a catalogue of it under the title *Egyptian Hieroglyphic Printing Type. From matrices in the possession of Dr. Alan H. Gardiner*. This book, printed and published by the Oxford University Press, is a very fine specimen of the printer's art. The signs are arranged in five columns numbered from *a* to *e* according to size. These five sizes provide every size of sign which can possibly be needed in printing either in 18-point or in 12-point. In 18-point *a* is the full-sized sign, while *e* is used when the grouping demands a smaller form; an intermediate size useful

original walls. The difficulty of the method lies in the fact that, when a wall is so large that it must be photographed in several sections on separate plates, the prints are never found to fit perfectly at the edges, however careful the precautions taken to secure accurate registering and parallelism. Mr. Emery has been experimenting with a very ingenious device designed to overcome this difficulty. Instead of drawing in Indian ink on the actual photographic print, he makes a lantern slide, projects it on to a sheet of drawing paper pinned to the wall, and draws in pencil over the projected image. The advantage of this system is that any distortion in the negative can be rectified by placing the lantern slightly out of parallel with the sheet of paper. The drawings can, moreover, be made on whatever scale is desired, and there can be no doubt that even the most skilled draughtsman can produce a better result by drawing on a large scale and subsequently reducing than by drawing over a print at the actual size required. The results certainly form an admirable testimony to the efficiency of the method. They will of course be corrected in front of the original walls before being passed for press.

Professor Kurt Sethe has published a second and improved edition of his *Ägyptische Lesestücke* (Hinrichs, Leipzig) which originally appeared in 1924. All those who are engaged in the teaching of Egyptian will be glad that a new supply of this most useful book should be available. The texts which it contains are all of the Middle Kingdom, and it is to be hoped that Professor Sethe will shortly make time to give us a series of New Kingdom texts equally well chosen. If he does, might we tentatively suggest that none but complete texts should be included. We realize that the appalling difficulties of parts of such Middle Kingdom texts as Prisse and The Peasant makes it inadvisable to insert them complete in a book mainly intended for learners. In the case of New Kingdom texts, which as a whole are less difficult, there is not the same excuse for omissions, and if one could rely on finding every text in its entirety the book would form a most invaluable place of rapid reference and would supply what is at present one of our most urgent needs.

In this number appear two old friends in new dresses, the Bibliography of Ancient Egypt and the Bibliography of Graeco-Roman Egypt. The first is the work of Professor Jean Capart, who among his other qualities possesses that of a bibliographer of the first order. His work has been printed in the language in which he wrote it. The labour of not merely translating it but of giving it the somewhat different turn which it would require in English would be so immense that it ought to be undertaken only if it could be regarded as absolutely necessary. Since all those likely to make use of a bibliography of this kind obviously possess the necessary knowledge of French, the labour involved in the change could not possibly be justified. The Bibliography therefore appears in French, in which language we are convinced that it will prove not a whit less useful than in English.

The Bibliography of Graeco-Roman Egypt, so long furnished by Mr. H. I. Bell unaided, comes this year from the hands of several contributors, all of whom we thank for their collaboration in a dull but very important task. Mr. Bell is kindly acting as editor of the whole.

The Society's library has received a copy of *Harmsworth's Universal History*, edited by J. A. Hammerton, in the illustration of which a certain number of the Society's photographs and colour drawings have been used. The names of the contributors to this work form a very remarkable list of scholars, and one may hope that the fact that

such men can be gathered as contributors to a popular work of this kind indicates not merely great initiative on the part of the editor but also a real desire on the part of the public to draw its knowledge from the best sources. The sales of the *History* might throw an interesting light on this. Immense pains have clearly been taken to produce a really scientific publication and its value is much increased by the almost extravagant scale of its illustration.

Since the above Notes were first set up we have had to deplore the deaths of two Egyptologists, Mr. A. C. Mace and Mr. A. G. K. Hayter. We hope to print in our next number some record of the life and work of both.

Dr. Hall sends the following note: In connexion with Mr. Winlock's publication in the *Bulletin* of the Metropolitan Museum, New York, of the new Hatshepsut statues found by him, the colossal limestone portrait of the queen (*op. cit.* fig. 47), is of great interest, since, so far as can be judged from the photograph, it seems to bear out the contention of Dr. Howard Carter and Mr. Newberry that the Tuthmosid head in the British Museum (No. 986), published in the *Journal*, XIII, 133, is a portrait of Hatshepsut rather than Tuthmosis III. The likeness seems great.

Dr. Hall writes: The stone of the British Museum head No. 986 was wrongly given in *Journal*, XIII, 134, as "green basalt." It is in reality that characteristic Egyptian green "slate," a stone that has often been mistaken for basalt, and is actually, Sir Flinders Petrie thinks, of volcanic origin. He calls it "a metamorphic volcanic mud, much like slate in composition but not in fracture" (*Scarabs and Cylinders*, p. 8). He names it "durite"; but as it was so often used to make heart-scarabs (a green stone being prescribed for this purpose), the name "kheprite" has been suggested for it (*Journal*, v, 75).

Mr. P. E. Newberry sends us the following: The death occurred at Luxor on April 6th of Mohammed Bey Mohassib, the veteran dealer in antiquities who was known to, and esteemed by, all Egyptologists. During the summers that I lived at Luxor (1895 and 1896) he was very often my guest, and he then told me much about his early career. Born in 1843, he started life as a donkey-boy, and among others whom he served in that capacity was Lady Duff Gordon, who taught him English. He then became an itinerant dealer in antiquities and it was the inadequately supervised excavations at Thebes and elsewhere that laid the foundations of his success as a merchant. In the early eighties of last century he opened his shop at Luxor, and through his hands have passed many of the most important Egyptian monuments that now enrich the museums of Europe and America. He was a man of fine character, generous, and beloved by all who knew him, especially by the poor of his native village.

The Fondation Égyptologique Reine Élisabeth, to which Egyptology already owes much and of which it hopes still more, has made a generous offer to the Society. The whole of the profits on sales in this country of the English translations of Professor Capart and Mlle Werbrouck's *Thebes. The Glory of a Great Past*, and of the "album" for children based on it (published by Allen and Unwin) are to be presented to the Society for its excavations at Tell el-'Amarnah. It is hoped that readers of the *Journal* will do what they can to encourage the sale of these two books, for they will by this means be doing a service to the Society. A notice of *Thebes* will be found on p. 202 of this number.

NOTICES OF RECENT PUBLICATIONS

[Every effort is made to secure a review, or at least a notice, of every serious work sent to us, so long as it lies within the scope of our Journal. The Editor cannot, however, guarantee that any book will be reviewed, for many of those who alone are capable of doing this work properly are already overburdened with it. A book which is definitely unsuitable for review in our pages is returned to the publisher.]

Greek Papyri in the Library of Cornell University. By W. L. WESTERMANN and C. J. KRAEMER, JR. 1926. xx+287 pp. \$10.

One of the recent developments of Papyrology is the formation of considerable collections of papyri at various centres in the United States. From time to time a few specimens from these acquisitions have appeared in periodicals, but no attempt had hitherto been made to edit them in bulk. Cornell now leads the way with a substantial volume, which is assured of a hearty welcome. It comprises 55 texts, of which only one, a small fragment relating to mythology and perhaps a school exercise, has any literary pretension. Five are of the Ptolemaic period, two, if not three, of these belonging to the great Zenon archive; the remainder are miscellaneous documents of the Roman age, mostly from the Arsinoite nome. As might be expected, they conform generally to types more or less familiar; but though none are of great importance and one or two of the more attractive have been previously published, points of interest are by no means lacking. Thus Nos. 19-20 are useful additions to the extant land-returns of the Diocletian period, and No. 24, a list of absconding defaulters from whom poll-tax and dyke-tax were due, incidentally disposes of the view that Roman Egypt supplies any analogy to the modern poor-rate. On the other hand, certain pieces are included which have but slender claims, especially when economy, as one learns with some surprise from the preface, had to be considered. Owing to that necessity the volume was produced by the singular process of photographing type-written pages. The outcome is anything but soothing to the eye, and it is much to be hoped that this experiment, which moreover has not resulted in a low price, will not be repeated. Its one advantage from the reader's point of view is that it perhaps tends to multiply facsimiles, which however, if of no special palaeographical interest, are less desirable than legible print. Economy might have been better studied by means of some compression of the commentary and translations, as well as of sundry omissions. With texts of greater importance awaiting publication, the expenditure of valuable time and space upon items like Nos. 27-8, 32, 52, 54 appears regrettable.

Successful decipherment is largely a matter of practice, and a rapid perception of what can or cannot be right is the product of ample experience. That the texts here presented should admit of improvement is therefore no more than natural. A number of corrections have been made by G. Vitelli and M. Norsa in *Studi italiani di Fil. Class.* v. i, and may still be added to. For instance, in No. 11 the unread adjective in the middle of l. 9 looks like ἀμύνης. In 17. 28, 30, 32 ā is probably (πρότερον), not the numeral, and l. 32 should accordingly run τ]αῖς τούτων ἀδελφαῖς, (πρότερον) τοῦ π(ατρὸς) (!) αἰτῶν; in l. 34]s is not ἐπερωτηθεί]s but a remnant of a personal name. μέτρον κτλ. in 44. 8 is a statement of the particular measure used in the transaction concerned; προσμε(τρονμένω) is therefore certainly wrong, and τλλης is more likely to conceal a personal name than to be connected with τήλις: Καρίτη in l. 2 is of course for Χαρίτη. In 45. 9 the reading adopted is, as observed by Vitelli, unsatisfactory; perhaps ὑπέρ τῶ]ν χρόνων τῶν ἀπό would fit. Should τετραερρ(αῖ) in 33. 6 be τετραδέρρ(ατα)? Inconsistencies between text and commentary are occasionally observable. At 17. 17, for example, where κ(ν)ημ'φ, is read, a note states that the first letter may be β, but in that case the κ should have been marked in the text as uncertain: no doubt the word is really βήμ(ατι), as in e.g. B.G.U. 667. 20. If, as rightly pointed out in the commentary, [...]θακατια in 29. 2 is evidently [σα]θακάτια, why not make that restoration in the text and eliminate the note? The editors do not seem always happy in their selection of points for comment, e.g. in No. 39 two lines are devoted to the everyday spellings σπονδῖον and καταγίω, whereas in 26. 3 a φυλακίτης (not -ιστής in papyri) of the second century A.D., and the form σπολικόν in 29. 1, pass without comment; or one would be glad to know how the abbreviation resolved as (αὐτοῦ) in 17. 25, &c., is written. Indices are commendably full, following closely the lines of E.E.S. publications. Whether the insertion of date with all proper names was worth while is open to question. ἰδροφύλαξ is out of place among military terms.

ARTHUR S. HUNT.

Les Papyrus Bouriant. By PAUL COLLART. Paris, 1926. 254 pp. 160 fr.

The Bouriant papyri are a small collection formed by U. Bouriant while director of the French Institute of Oriental Archaeology at Cairo. Excerpts from one of them, a school exercise-book containing verses of Menander, &c., were printed as long ago as 1898, and the texts of a few others have appeared since then at intervals, but they are only now published collectively in a systematic and handsomely produced volume.

A few are literary. Of the novelties in this category the most valuable is No. 8, fragments from a treatise on dialects, with quotations from Sappho and Alcaeus (cf. Lobel's edition of the latter, p. 75). Col. iv is fairly consecutive but not yet fully intelligible; a facsimile of it might with advantage have been included in the four excellent collotype plates. Restoration would also have been assisted by an approximate indication of the number of letters lost in the lacunae. No. 3, which consists of several columns from a Christian homily, gains considerably in interest through Wilcken's recognition of it (*Archiv* VIII 304) as belonging to a codex from Achmim of which further portions are preserved in the Bibliothèque Nationale; a piece of that MS. copied by Wilcken in 1887 follows immediately on Col. ii of the Bouriant papyrus. The two sets of fragments should now be brought together and studied afresh. Homiletic literature is further represented in No. 4, part of a 6th-century leaf in which the names of Paul and Thecla occur among others. Of a small group of Ptolemaic documents, three letters from Pathyris of the year 88 B.C. had been previously published; No. 9, as pointed out by Wilcken, *l.c.*, contains signatures to a will. Nos. 13-63 are miscellaneous documents of the Roman period, some very fragmentary (of 43-63 descriptions only are printed), but several of much interest. The most imposing is 42, a long roll inscribed on both sides with a survey-list drawn up by the comogrammateus of an Arsinoite village in the year 167. Numerous specimens of similar documents are to be found in other collections, but lack the comprehensiveness of these 29 columns, which afford an insight into the local tenure and cultivation of land in the middle of the second century A.D. comparable with that given by the Tebtunis papyri three centuries earlier. The information to be derived from this important text has been skilfully drawn out in M. Collart's elaborate commentary. The $\text{Max}(\) \text{οὐσία}$ mentioned in l. 82 and elsewhere is no doubt the domain of Maecenas, which is known to have been situated in the district under consideration; for the dropping of the first iota cf. P. Rylands 207 introd. Several unsolved difficulties are presented by the two opening columns of the verso. In ll. 423 and 439 $\rho\nu$ followed by a suspended π must be $\rho\nu\pi(\text{αροῦ})$, not $\pi\rho\nu(\text{o})\nu$, and $\rho\nu$ in ll. 422 and 424 should represent some similar epithet. $\nu(\acute{\iota})\sigma(\acute{\iota})$ in l. 435 &c. is unconvincing: can it be $\tau\sigma(\acute{\iota})$? Another welcome acquisition is 13, which seems to be the first example of an agreement of partnership in the exploitation of a monopoly. Unfortunately it is in a poor state of preservation; perhaps some of the lacunae may yet be healed by further study. In 15, a series of abstracts of contracts, ll. 44 f. refer to a contract of marriage, and should run $\acute{\epsilon}\alpha\nu \delta\acute{\epsilon} \text{διαφορᾶς αὐτοῖς γενα(μένης) (χωρίζωνται) ἀπ' ἀλλήλων, ἀποδο(τω) αὐτῇ τὴν φερνήν}$ (cf. *e.g.* C.P.R. 27. 16); l. 104 is presumably $\pi\epsilon[\rho\acute{\iota} \text{κῶ}] \mu\eta\nu \text{Λυσμαχ[ί]δα}$. In 16, an analogous document, a few emendations are suggested by the accompanying partial facsimile: l. 10 $\mu\eta\tau\rho\acute{\iota}\kappa\acute{\omicron}\nu \gamma\acute{\alpha}\lambda\alpha$ (but the preceding verb is not clear), 13 $\pi\rho\epsilon\sigma] \beta(\nu\tau\acute{\epsilon}\rho\omicron\nu) \alphaὐτοῦ \acute{\alpha}\delta\epsilon\lambda(\phi\omicron\upsilon) \dots \tau\acute{\omega}\nu \pi\rho\acute{\omicron}\tau(\epsilon\rho\omicron\nu) \beta\upsilon\beta\lambda(\iota\omicron\phi\upsilon\lambda\acute{\alpha}\kappa\omega\nu) \tau\epsilon\tau\epsilon\lambda(\epsilon\upsilon\tau\eta\kappa\dots)$, 14 $\pi\rho\kappa\epsilon\iota(\mu\acute{\epsilon}\nu\omega\nu)$ ($\acute{\alpha}\rho\omicron\upsilon\rho\acute{\omega}\nu$) δὲ, 18 $\pi\acute{\iota}\sigma\tau\iota\nu \text{᾽} \mu\acute{\epsilon}\rho\omicron\varsigma \text{κλή(ρ\omicron\upsilon)}$?, 16 $\tau\acute{\omega}\nu \gamma\epsilon\gamma\upsilon(\mu\upsilon\alpha\sigma\iota\alpha\rho\chi\eta\kappa\acute{\omicron}\tau\omega\nu) \text{᾽} \text{Ὁξορίγγ(ων)}$, and similarly $\gamma\epsilon\gamma\upsilon(\mu\upsilon\alpha\sigma\iota\alpha\rho\chi\eta\kappa\acute{\omicron}\varsigma)$ before $\sigma\epsilon\sigma\eta\mu(\acute{\epsilon}\iota\omega\mu\alpha\iota)$ in l. 18. Nos. 23 and 25 are well preserved private letters, the latter, in which a daughter announces her mother's death, written from (Syrian?) Apameia; $\mu\epsilon\theta' [\acute{\epsilon}] \alpha\upsilon\tau\eta\varsigma$ in l. 9 = $\mu\epsilon\tau' \acute{\epsilon}\mu\alpha\upsilon\tau\eta\varsigma$ and belongs to the protasis. In 23. 13 Wilcken seems right in querying the name Τάσμη : perhaps $\tau\acute{\alpha} \text{ἔχοντα} \langle \text{Ταμοῖτα} \acute{\epsilon}\iota \mu\grave{\eta} \text{κτλ.} \rangle$ should be read. A rather lengthy list of misprints is given on pp. 253-4, but is neither exhaustive nor itself quite irreproachable.

ARTHUR S. HUNT.

Der heutige Stand der römischen Rechtswissenschaft. By Professor LEOPOLD WENGER. Munich, 1927. viii + 113 pp.

This work is an expanded lecture, in which the free expression of personal points of view naturally predominates over close argument. The tone is professorial without being dogmatic: the lecturer is careful by references to literature to open the door to a critical appreciation of his teaching. These references do not profess to be complete, but as in all the writer's work they are abundant and well-chosen.

Professor Wenger has so much more to hold together than all but very few scholars that one feels that the duty of synthesis is specially incumbent on him, and at the same time that his synthesis, which he has here (in outline) made *publici iuris*, is of special value to those whose range is more limited. He covers

with easy mastery an immense field, from prehistory to the most modern problems of politics and jurisprudence, but the readers of this *Journal* will not peruse many pages of this lecture without being made aware or reminded, sometimes in unexpected connections, of the significance of Egyptian studies. Certainly papyrological studies are here given their full value for world-history, though they are not the main theme of the discourse. But the chief purpose of the lecture is to produce a heightened sense of the interaction of races, institutions, ideas, periods, and of the significance of each detail for the whole, and to dwell in a short review on particular points would be a misrepresentation. One may be allowed, however, to call attention to the full and accurate summary of modern work and tendencies in the editing of the sources and in the preparation of mechanical aids (indexes and the like) to their utilisation (pp. 15 ff.). Of special interest to the Roman lawyer are the remarks on Digest criticism (interpolation question, Berytus: pp. 23 ff.), with which should be compared the account of J. Stroux's recent *Summum ius summa iniuria* (Teubner) given in a later passage (pp. 102 ff.).

F. DE ZULUETA.

The Tomb of Huy, Viceroy of Nubia in the reign of Tutankhamūn. (No. 40.) (The Theban Tombs Series.)
By NINA DE GARIS DAVIES and ALAN H. GARDINER. Published under the auspices of the Egypt Exploration Society, London, 1926.

Egyptology will very shortly be faced with a problem in regard to the private tombs of Thebes. If they are all to be published in full their literature will form a wood which cannot be seen for the trees. The time is probably ripe now for the appointment of some kind of commission to decide which tombs are worth copying and publishing in full, which are worth copying in part, and which are not worth copying at all. Such a commission might even make recommendations for the apportionment of the work worth doing between the various societies, institutions and private individuals interested in this particular class of publication.

In the meanwhile we welcome the fourth volume of the *Theban Tombs Series*, partly because it deals with a tomb almost all of whose contents deserve publication, partly because it is the product of that combination which alone is competent to do such work, namely, a first-rate draughtsman working with a first-rate philologist.

The story of the deterioration of the private tombs during the 19th century is a sad one, but the authors have done their best to repair the loss by making full use of such early documents as the Hay and Wilkinson MSS., the note-books of Nestor l'Hôte and Weidenbach's original drawings for Lepsius' *Denkmaler*. The tomb itself has a special interest, for it is not only the most considerable and most tangible monument of the reign of Tutankhamūn, but it also gives us some information, perhaps little more than corroborative of what we already had, about the administration of Nubia under the New Empire. What is more, it is a particularly fine specimen of Egyptian decorative art, the two tribute-scenes, that of the Asiatics and that of the Southerners, being admirable examples of the Egyptian artist's ability to seize and render faithfully the national characteristics of surrounding nations. The Asiatic scene is also interesting historically. If we may believe Akhenaten, Syrian tribute was still being received in his twelfth year, and here in the tomb of Huy Tutankhamūn makes a similar claim, which we cannot lightly dismiss, though the tribute be presented strangely enough by a viceroy of Nubia, whose only title to preside over this ceremony is the very indefinite one of "king's envoy to every land."

Professor Gardiner, who is responsible for the text, has carried out his task in the scholarly way which we have learned to expect from him. He has revealed himself in these volumes not only as an admirable translator and commentator of difficult and defective texts, but also as an acute and painstaking interpreter of the scenes which the texts accompany. Particularly striking is his explanation of the position occupied by the various scenes and by the various parts of the same scene. On p. 29 there occurs what we now know to be an overstatement, and if we draw attention to it here it is only as an interesting example of how the best may err when relying on negative evidence. It is stated that in Pl. XIX a certain Huy is seen holding a gold pectoral "the size of which has been ludicrously exaggerated." When these words were written they were true within the limits of our experience. Since then, however, the tomb of Tutankhamūn has produced a gold pectoral—not the happiest example of the Egyptian designer's art—more than twelve inches in breadth, that is at least three times the size of any previously known to us. Consequently Huy's artist was guilty of no exaggeration.

As for the drawing of the scenes, the name of Mrs. Davies is in itself a guarantee that they are of superlative merit. There are five excellent coloured plates, of which the finest is Pl. XXVIII, "The Homage of the Nubian Princes." We are inclined to think that this is the best piece of colour reproduction from an Egyptian tomb which has yet appeared. Both Mrs. Davies herself and the makers of the plate are to be congratulated on the result.

One suggestion in conclusion. Among plates nearly all of which are double it is difficult to turn quickly to any particular plate desired, because the alternate blank pages give one no clue as to one's whereabouts. This difficulty could be very simply avoided by printing the number of each plate not only on the front but on the back, in such a way that it appeared at the top right-hand corner of the blank page preceding the plate. We believe that this is not at all a costly operation, and we know by experience that it makes reference to isolated plates five or six times as rapid.

T. ERIC PEET.

Ancient Egyptian Materials. By A. LUCAS. London: Edward Arnold and Co., 1926.

Ancient Egyptian Metallurgy. By H. GARLAND and C. O. BANNISTER. London: Charles Griffin and Co., 1927.

These two books are both written by specialists in exact sciences who have had exceptional opportunities of studying their respective subjects in relation to Egyptology. Consequently they both have a great deal of invaluable information to offer the Egyptologist of a kind which is normally beyond his reach. Archaeologists are realising more and more the necessity of calling in outside specialists, and no two experts could in their own lines be better chosen than Mr. Lucas and the late Major Garland. But both the books under review are marred by an underlying attitude to the reader which is thoroughly unscientific.

It seems that Mr. Lucas is so impressed with the inexactness of archaeology that he feels that he can talk down to us; that he can in short lapse from the exact standards of his own science to the loose ones of ours. Only on such a supposition can we explain the extraordinary ineffectuality of his references throughout this book. Although there are references on about three-quarters of the pages of the text, frequently to several authors and their works, in no single case, so far as I am able to discover, is the page indicated; and this in spite of the fact that the majority of the references are to isolated objects which in many cases one could not possibly expect to find in the index of the volume cited. On p. 142 there is a reference to an article by Noel Heaton in the *Papers of the Society of Mural Decorators and Painters in Tempera*. Not only is the title of the article omitted, but there is no mention of the fact that this article occurs in the second of the two volumes published—at some interval between one another. The pearl of this collection of almost useless references occurs, appropriately enough, on a page headed "shells" (213). The passage reads: "A few objects of tortoiseshell...among which may be mentioned... a soundboard for a small harp," to which is appended a note of three words: "British Museum Guide"! Which guide?

The principle underlying this grave fault has a deeper significance and has led to a vital misconception of the proper treatment of the subject. Mr. Lucas is entirely justified in accusing Egyptologists of repeating initial mistakes made in the past "without inquiry or verification" until, from constant repetition they have become accepted without question (pp. iv and v); and we cannot be too grateful for the many instances in which he has pointed out these errors and corrected them, both in journals and in the present volume. But this does not mean that he may ignore the work of archaeologists, as he confesses that he does (pp. iii, iv), in the matter of translations from the ancient records. If authorities differ in their translations, then at least he should consider the merits of the various sides in the light of his own investigations. Nor is it clear why "the ancient records" can "at best only have been second-hand originally" (p. iv), unless he is referring to classical writers solely; in which case his neglect of the actual Egyptian record is the more downright. Nor, again, has he the right, when dealing with precious stones, to say that although some of the names have been translated, the possibility of mistranslation excuses the author from taking any notice of this sort of information (p. 157). If in a matter which must clearly contain some element of conjecture no attempt is made to harmonise or sift divergent opinions, how can archaeologists be expected to pay due respect to the author when he impugns a fellow-chemist, Dr. Reutter, on account of such a materialistic investigation as the analysis of resins (pp. 118-19)?

In short it is useless for Egyptologists to call in scientific experts or for these experts to preach to Egyptologists, unless the two are prepared to work together—the more literally so the better. And the

chief objection to Mr. Lucas' book is that, because he has refused to take the archaeologist into his confidence he has failed to do justice to many of the subjects which he discusses. Not only is the scientific value of what he has to say frequently invalidated by the incomplete nature of his references, but the book itself is far too small for the scope envisaged by him. Our chief hope is that the present volume is a sketch for a much bigger book—preferably to be written in collaboration with an Egyptologist—which is to follow. Unfortunately this is not likely to happen, as in spite of its faults, *Ancient Egyptian Materials* is itself too useful to be neglected by any Egyptologist, and will thus lessen the demand for a better book.

Mr. Lucas' frequent correction of traditional errors has been noted above. In some cases these have already been dealt with by him elsewhere—*e.g.*, the nature of Egyptian plaster; of the stone used for the Great Pyramid; of materials used in mummification with special reference to the absence of bitumen. His remarks on the distinctions in stones (the nomenclature of which would appear to hold a different "blessed word" for every archaeologist) are very salutary, though clearly the best description will not enable the layman to acquire proficiency in identifying different kinds without considerable practical experience of the stones. Mr. Lucas shows frequently that objects and materials which have regularly been called foreign by archaeologists, are almost certainly home products, or at least that there is no reason to look outside Egypt for their origin. An important example in the latter connection is the "fat" in the wavy-handled jars of Naḳádah, with obviously far-reaching possibilities. His statements as to the possibility of hardening copper by beating alone, and his definite assertion (in complete agreement with Garland) that there was no secret process of hardening the metal beyond the hammered stage, must be taken as final. On the other hand his view (p. 215) that copper was first produced in Egypt is based on the misinformed statement that "in every other country copper appears at a later date." Putting aside archaeological arguments for the origin of copper working outside Egypt, which at least demand a more careful examination of the subject than Mr. Lucas has given it, the quotation above can hardly stand against the evidence from the first civilisation at Susa. Presumably Mr. Lucas himself will be less certain of his opinion after seeing the amazing wealth of copper tools from the earliest graves (certainly before 3000 B.C.) excavated last season by Mr. Woolley at Ur. Clearly those graves represent a civilisation which presupposes a very considerable antecedent period of apprenticeship in copper-working, besides showing in their own copper contents a great superiority of technique over the contemporary copper remains from Egypt¹.

Similarly, through his neglect of Mesopotamian evidence the author has been led to make a much too definite attribution of the *invention* of glaze (with less definitely—as a rider—the origin of glass) to Egypt. Even were the lump of blue glass of about 2400 B.C. found by Dr. Hall at Abu Shahrain and now in the British Museum the only evidence for early glass work in Mesopotamia it could not be so easily dismissed as is implied by Mr. Lucas' assertion.

A few smaller points are worth noting. P. 21, the implication that the Egyptians did not *know* of lime-burning till the Romans brought it from Europe is probably misleading, since the Cretans were burning lime for their frescoes at Knossos at the period of greatest contact between Crete and Egypt. Indeed there is the evidence of the painted pavements from Amenophis III's palace at Medinat Habu and from those of Akhenaten at Tell el-Amarnah, to show that the Egyptians had to some extent acquired the

¹ Since this review was written Mr. Lucas has published (*Journal*, XIII, 162 ff.) a somewhat longer plea for the discovery of copper in Ancient Egypt, but he does not there give us any reason to modify our criticism. It is not generally denied that copper-working existed in Egyptian territory during the Middle and Old Kingdoms and even earlier, but it is regrettable that Mr. Lucas should dispute the opinions of such a well-known expert on copper-mining as Mr. T. A. Rickard in order to prove his view that Egypt supplied *all* her own copper up to the Twelfth Dynasty. Mr. Lucas dissociates himself from the "diffusionist" theory of a "single centre for the knowledge of copper." It is not clear, however, that he is not prepared to demand just such a primary position for Egypt, for his statement "but all stages of evolution from the simplest [copper] objects to the more complex have been found in proper sequence, and unless it can be clearly proved that copper was known outside Egypt at a period anterior to its use in Egypt, which has not yet been done, it is only reasonable to credit the Egyptians with the discovery" certainly implies that, *were* there proof that copper was known outside Egypt at a period anterior to its use in Egypt, we should have to conclude that the Egyptians (in spite of their sequence of copper objects) *did* acquire copper-working from outside. This seems to bring us back to the "diffusionist" theory. Whether that is a right view in this particular instance is perhaps a matter of opinion, but the most recent copper finds from Mesopotamia are matters of very bulky fact. For some persons they may not preclude the possibility of an independent discovery of copper by the Egyptians (though certainly precluding the discovery of copper by them); but if we are to take Mr. Lucas at his word, he at least will now have to admit that Egypt borrowed the art of copper-working from abroad.

technique of true fresco at this time—clearly from Crete. P. 50, not all red glass, at all events during the Eighteenth Dynasty, is of the cuprous oxide type which shows green breaks when corroded. P. 90, the red discoloration of gold was not always, as is here implied, *accidental* owing to impurities in the metal, though doubtless this was the origin of the discovery of the means to produce this red tint. Mr. Harold Ridge and later Dr. Alexander Scott have pointed out that the colour of the red sequins in a robe of Tutankhamūn was intentional, being caused by the admixture of a small amount of iron with the gold. P. 130, also some of the cosmetic found in Tutankhamūn's Tomb has been analysed by Mr. Chaston Chapman and Dr. H. J. Plenderleith (*Journ. of the Chem. Soc.*, Oct. 1926). Pp. 137, 138, in the New Kingdom pink colour was regularly obtained by simply mixing red and white. Pp. 141, 142, there is a cylinder seal in the British Museum of blue frit of the Sixth Dynasty. P. 149, the comparatively late date of the introduction of the domestic fowl into Egypt is surely no argument for denying the possibility (for which there seems to be some material evidence) of the use of albumen as a medium in painting! The duck was the Egyptians' "domestic fowl," and they doubtless counted at least one or two good laying strains among the various breeds. As a producer of albumen the "Egyptian Runner" could probably hold her own with the "Buff Orpington."

Major H. Garland was, before the war, Superintendent of Laboratories at the Citadel, Cairo, where he had "exceptional opportunities for the collection and thorough examination of ancient metal specimens not easily obtained by other metallurgists." After distinguished service in Arabia during the war, he was with Lord Allenby at the Residency in Cairo, as Director of the Arab Bureau. In 1921 ill-health compelled his return to England, where he died suddenly, six days after his arrival.

This tragic incompleteness of his life is painfully mirrored in the book under review. Major Garland was at work on the manuscript when he died, but it was still in such an unfinished state that the publishers handed it over to Professor Bannister, of the University of Liverpool, to put in order.

Professor Bannister is a metallurgist, and evidently very ill acquainted with ancient history. It is a great pity that he did not submit his proofs to the scrutiny of an Egyptologist before allowing the book to go to press. This would have saved it from "howlers" and ineptitudes which may well damn it outright for an archaeologist who happens to open it at certain passages. "Piupi" for Pepi (*ρiϑϑim*), "Professor Flinders Petrie" (p. 6) and "Dr. Budge of the British Museum" (p. 86) are merely anachronistic; to say that in the Eighteenth Dynasty "Asia was subdued" (p. 10), and to call the wife of Takeloth I "just pre-Saitic" are inaccuracies; to describe a bronze foot as engraved on each side with "the Ankle or symbol of life" may be the printer's error, but looks very much as if it might be the editor's; but to confuse Syria and Assyria on the same page, as he does on two occasions (pp. 15 and 55), is a real offence.

It may be some palliation that the book is written primarily for metallurgists (though they also will be handicapped by the extraordinary lack of references, and their unhelpfulness where they occur, *v.g.* of the object "generally alluded to as the Brazier of Khety, and now in the Louvre," we are told "*in the catalogue of the British Museum* it is spoken of, etc."). Moreover the book is sufficiently intelligible to the layman—the important chapter on the metallography of antique metals is highly technical but presents its results clearly—to be obviously of first-rate importance for the study of metallurgy. Nor on the other hand should the Egyptologist be put off by the superficial if glaring faults enumerated above.

The book contains six chapters, of which II and III ("Bronze Industry of Ancient Egypt" and "Iron Age in Egypt," respectively) are far the most important. The essential fact to be learnt from the former is that the *cire perdue* or waste wax process of casting copper and bronze objects was in far greater use and lasted much longer than has generally been supposed, and that "raising," *i.e.* the "gradual shaping of a vessel by hammering" (as opposed to roughly casting and then finishing off with the hammer) was very much less in use than it is frequently stated to have been. One of the details in the evidence adduced to prove these facts is perhaps of more interest than the facts themselves, namely the use of *iron* struts to hold the core in place when casting by the above method.

These iron struts go some way to secure our confidence in Major Garland's thesis put forward in the next chapter—easily the most important for Egyptologists. His thesis is that the Iron Age began with the Old Kingdom in Egypt, that is about a millennium and a half before it begins in Europe. In a long chapter he states his case forcibly, with nothing but the short list of four or five iron specimens dated before the New Kingdom as material evidence—the same list from which Lucas and Wainwright before argued for a late arrival of the Iron Age in Egypt, more in keeping with the European date and the slightly more frequent occurrence of iron specimens in Egypt from the late New Kingdom down to Roman times.

Wainwright implies (*The Labyrinth, Gizeh and Maghunch*, 17) that the smelting of iron is a more difficult process than the smelting of copper. Actually copper is "far more difficult to obtain from its ores" than iron (Garland, p. 85). But given the two metals, iron is the harder to work, particularly if the smith has not got handled hammers, as appears to have been the case with the ancient Egyptians, because it has to be worked hot. But this is a further point in favour of Garland's view, for it helps to account for the one real difficulty in the way of accepting an early date for the Iron Age, *i.e.* the extraordinary rarity of iron remains. Garland argues that the difficulty of working the metal confined its use to a few and skilled craftsmen, as well as to those purposes only which could not be served by copper or bronze. These practically amount to one thing—providing the stone-cutter's chisel. But copper and in its turn bronze, hardened by beating, were sufficient for the ordinary stones, limestone, sand-stone, alabaster, *etc.*, and were used for this purpose even after iron is generally considered to have been in regular use. *Hence the still comparatively rare occurrence of iron remains even after 1200 B.C.*—a point to which Egyptologists have not allowed due weight. Moreover the supplies of the metal were probably not abundant. And finally, iron rusts and disintegrates much faster than, *e.g.*, copper.

This postulating of an early Iron Age in Egypt is no mere academic challenge. To the metallurgist it is the least difficult solution of a problem of which archaeologists have all been aware for some time; to explain how the ancient Egyptians were able from the Third Dynasty onwards to incise the hardest stones they knew with clear-cut hieroglyphs, with apparently no harder metal than copper.

With a view to its solution Mr. Lucas reminds us of the following points (*Ancient Egyptian Materials*, p. 82): 1. Tools of flint and other hard stone were in common use. 2. Abrasives were used. 3. The Egyptians used other tools besides the chisel, *e.g.* drills and saws which could be fed with abrasives. 4. The infinite patience of the Egyptian worker.

Take point 3 first. Major Garland shows that it is inconceivable that certain details, notably in the cutting of small hieroglyphs in granite "with sides and bottoms perfectly flat and corners sharp," were done by any tool but a chisel, though he would certainly admit in general an extended use of saws and drills. Now he has found (Lucas' point 2) by experiment, that a chisel of the best copper fed with emery is entirely ineffective against this stone. As to point 1, it is obvious to anyone who knows anything about flint, that its use as a *chisel* on hard stone is quite impracticable because of the tendency of flint to flake; and it would certainly not be possible to obtain a sufficiently fine edge on any other stone of sufficient hardness to cut granite, except with a still harder metal tool. On the other hand Mr. Lucas' fourth point is one to be stressed, and has scarcely been taken into account by Major Garland. The latter "strongly begs" us to try the copper-emery method ourselves, and describes the results as "to say the least, disheartening." Unless "disheartening" is a euphemism, it rather gives away the less compromising phrases of his previous paragraph. One can imagine few more disheartening things than grinding out a large breccia pot in those still earlier days when even he would not postulate the use of iron.

Nevertheless, weighing both sides of the argument it seems to the present writer that Garland has the better of it. And now fresh archaeological evidence is coming to his aid. Mr. Carter's dagger from the tomb of Tutankhamun caused a considerable sensation when it was published. A less interesting find (but still an important addition to the list)¹ of about the same period was made by Professor Griffith at Tell el-Amarnah in 1924, when he discovered in a house a lump of iron oxidised on to a bronze axe-head. How much more to the point than both these objects are the considerable remains of an iron weapon or tool, from one of the earliest tombs (before B.C. 3000) excavated by Mr. Woolley last season at Ur, and recently on exhibition in the British Museum? The chances of iron of that or later dates persisting in anything like recognisable form down to the present day, are far more remote in Mesopotamia than in Egypt, and it is therefore useless to argue that this was a unique specimen. Iron remains are just as rare in Mesopotamia at a much later date—during the fourteenth century B.C.—when there is ample inscriptional evidence for its use—a date which incidentally is well antecedent to that commonly assumed for the general use of iron in Egypt.

There is not yet enough evidence to *prove* Major Garland's contention, but it merits, if not provisional acceptance, at least the very careful consideration of Egyptologists. For this chapter on the Iron Age, if for no other, this book should be read.

S. R. K. GLANVILLE.

¹ Dr. Hall tells me that there is a pair of iron bracelets of the Eighteenth Dynasty in the collection of Mrs. J. H. Rea, roughly worked with dogs' heads.

Kings and Queens of Ancient Egypt. Portraits by WINNIFRED BRUNTON. History by eminent Egyptologists. Foreword by Professor J. H. BREASTED. London: Hodder and Stoughton. pp. 163. 18 plates.

In this delightful book Mrs. Brunton has published colour reproductions of her miniatures representing some of the rulers of Egypt. In the Foreword her work is announced as a contribution to history. This is hardly correct and to review this work in an Egyptological journal brings with it the same difficulties as the discussion in a historical journal of a literary biography, such as those by André Maurois or Emil Ludwig. The literary biography deals with its hero for his own sake, while history is only concerned with him in so far as he has influenced the course of events in his time. Portraits however are biographies condensed in one significant moment, pregnant of the past which it explains and of the future which it foreshadows. Both portrait and biography therefore, once assuming that proper use is made of all the available data in their conception, find their value dependent on the power of representation, the convincingness with which a particular subjective view on past life is rendered, the artistic qualities in short.

In some cases the royal mummies, in others statues, have been the starting point for the resuscitation of these kings and queens in Mrs. Brunton's mind; and all the subsidiary features, such as dress and ornaments, are given as truly as one may expect from an artist of such high archaeological standing. The rendering in a modern way of so many objects only known to us from Egyptian conventional drawings is often a revelation. But that the reconstruction of the appearance of these rulers is based on so much objective evidence does not do away with the fact that they are entirely subjective in essentials. For, of course, the attributes and the dead remains of a human being give but the smallest and least important elements which determine his bearing. Thus the powerful portrait of Seti I, whose mummy could be studied, is neither more nor less valuable than that of Ty, based on statues only, or than the dream-like vision of Khafra, frankly given as such; for all three show the same penetrating understanding. The witty portrait of Ramses II remains somewhat more at the surface; and those of Akhenaten and Nefertiti do not do justice to the complicated and interesting psychology of their subjects, and we may well hope that Mrs. Brunton will treat them again, using to the full the extensive material which Dhutmose's workshop at Tell el-'Amarnah has provided.

Besides the pleasure they provide these portraits have a particular value for an Egyptologist because they compel him to scrutinize anew his own ideas on these monarchs now that he is confronted with the impression they created on the highly sensitive mind of an artist able to render what appeared to the mind's eye.

As to the text of this volume, it is obvious that it will be best either where it provides a word-picture permeated by the same spirit as the portrait to which it refers (this is the case with Mr. Winlock's charming treatment of Tetisheru) or where it merely gives facts without attempts at literary biography. Professor Peet's discussion of the 'Amarnah-rulers deserves special notice as it contains original research, and is in fact the most up-to-date treatment of that important period.

H. FRANKFORT.

The Credibility of Herodotus' Account of Egypt. By WILHELM SPIEGELBERG, translated from the German by A. M. BLACKMAN. Oxford: B. Blackwell. 1927. Pp. 40, 2 plates, 5 figures in text.

This little book is a translation of a lecture delivered by Professor Spiegelberg and published by Winter of Heidelberg in the series *Orient und Antike*. The discussion is mainly confined to testing the credibility of the historical statements of Herodotus with regard to Egypt, since it is in this respect that his account has been mostly called in question. The circumstances of Herodotus' tour in Egypt are reviewed, and the very probable conclusion reached that he never came into contact with the upper classes of the country, but that his informants were innkeepers, dragomans, and minor officials of the temples; just the types in fact with whom the tourist in any land comes most into contact. On this supposition rests the whole of Spiegelberg's argument, for his main thesis is that the marvellous tales which are embodied in Herodotus' history and which have earned for him so much disrepute as a romancer are just those folk-tales which were current in his time among the lower classes, to which his cicerones chiefly belonged. An apt comparison is made with the extraordinary tales told by the modern dragoman to tourists in Egypt today.

Herodotus is thus acquitted of the charge of deliberate lying, but one must admit that by the insertion of such stories in a serious work he shows a lack of the critical faculty which is in marked contrast to the acuteness of his observation in other matters. Nevertheless, as Spiegelberg points out, his very credulity has enshrined for us folk-tales which would otherwise have been lost, and thus enables us to catch something of the spirit of the Egypt of the fifth century B.C.

This lecture is to be recommended to all, Egyptologists and others, who are interested in the classical accounts of the Ancient East, and Dr. Blackman has done a great service in rendering Spiegelberg's paper available to those to whom German is either an obstruction or a stumbling-block. The translator's foot-notes are of value in supplementing the text at certain points.

R. O. FAULKNER.

Études d'égyptologie: Bases, méthodes et résultats de la chronologie égyptienne. Par RAYMOND WEILL. Paris: P. Geuthner. 1926. Pp. 216.

M. Weill begins this book with a brief account of the systems of Egyptian chronology current prior to Meyer's exposition of the Sothic method of date-determination in 1904, and describes the steps which led up to Meyer's work. He re-states the grounds on which the Sothic system is based and submits it to a fresh examination. For this system to have any value for fixing Egyptian chronology, it must be first demonstrated that the slow revolution of the Egyptian civil year on the fixed Sothic year pursued its course undisturbed throughout the period with which chronologists are concerned, and a chapter is devoted to discussing this point, the conclusion reached being that there was no adjustment of the two calendars within the dynastic period. The date for the beginning of the Eighteenth Dynasty given by the astronomical calculations is sufficiently in accord with the historical evidence to show that there was no interference with the calendar as far back as that date, and although there is no decisive evidence of non-adjustment during the Second Intermediate Period, the arguments advanced by M. Weill against the possibility of adjustment of the calendar are very weighty.

As a result of his re-examination, the author accepts the Sothic chronology, and, in accordance with his views previously expressed elsewhere, adheres to the "short" dating of Meyer. The corruption of the "Manethonian" figures for the Second Intermediate Period is demonstrated by the remarkable arithmetical relations which exist between them, but M. Weill goes further, and attempts from those relations to establish the prototype of the dynastic figures of the Greek writers for the Thirteenth to Seventeenth Dynasties. The result at which he arrives allows 259 and 151 years for the Fifteenth and Seventeenth Dynasties respectively, and an unknown number of years for the Thirteenth, while the Fourteenth and Sixteenth drop out completely. Results, however, which are derived solely from the manipulation of figures are very precarious, and Weill himself takes no account of these totals in the scheme of chronology. The Turin Papyrus of Kings is entirely ignored in the discussion of this period.

With regard to the period prior to the Twelfth Dynasty, the author accepts Meyer's datings, but with the reservation that they might perhaps be reducible by a century, the burden of difference falling on the Seventh to Tenth Dynasties. Assuming a mean date of B.C. 2500 for the Sixth Dynasty, he points out that the dates of working expeditions to Sinai and Ḥammāmât recorded during that period fall between February and July of the Gregorian calendar, whereas the normal season for expeditions during the Middle Kingdom lay between January and April. Weill is inclined to bring the date of the Sixth Dynasty down a century to obtain agreement between the seasons, but the discrepancy may be due simply to the paucity of records in the Old Kingdom, and as we lack the conclusive evidence of a Sothic date in the Old Kingdom it is safer to accept Meyer's figures, which are based on the Turin Papyrus. Borchardt's theory, which would date Menes in B.C. 4186, is rejected *in toto*. Weill denies Borchardt's supposed high Nile datings in the early Annals, and equally rejects the latter's view that the Palermo and the Cairo fragments come from two different monuments. He is of opinion that they are portions of the same document and supports his view by a comparative table of measurements. These measurements, though only approximate in the case of the Palermo stone, agree so closely that it is difficult to believe that the two fragments are not connected.

From the general historical chronology the author proceeds to the difficult questions of the month-names and their corresponding feasts. In discussing the apparent discrepancy between the arrangement of the monthly feasts shown by the Ebers calendar and that shown in the later temple-calendars and the Graeco-Roman month-names he rejects the theory advanced by Gardiner and supported by Meyer, according to which there was a backward shift of all the feasts in the calendar to the extent of one month at a date subsequent to that of the Ebers list, and adheres to that of Sethe, whose view is that the feast after which a given month was named was celebrated at the end of that month and culminated on the first day of the following month, so that for example the feast of the "Birth of Rē," after which the twelfth month was named, was actually dated on 1st Thoth. The feast-calendars of the temples, as well as of the

Ebers Papyrus, seem to have referred to a fixed (Sothic) year which was used for religious events alone, the corresponding months of the civil year being named in accordance with those of the religious calendar.

Just before the beginning of the Christian era, the Alexandrine calendar was introduced, with its New Year's Day on the 29th or 30th August (Julian), so that for a while there were three calendars in use at the same moment. This remarkable state of affairs renders it necessary to ascertain to which calendar a given date refers, and this point is illustrated in this book by a discussion of the dating of the feasts of Osiris, stated by Plutarch to have taken place in the month of Athyr. These feasts however are dated in the temples on the 26th Khoiak, which in the Sothic calendar corresponds to the middle of Athyr in the Alexandrine calendar, so that it is clear to which systems the datings of the temples and of Plutarch respectively refer. On the other hand, the testimony of the Decree of Canopus and of the astronomer Geminus points to religious events having been dated in terms of the shifting civil year. Weill gets over this difficulty by suggesting that this latter state of affairs held good only for certain places or perhaps certain periods, and maintains that all the temple calendars which have survived refer to the Sothic year.

During the Roman period the winter solstice was marked by celebrations on the 5th-6th January (Julian), which were Osirian in character, and it would seem as if a second Osirian cycle fell on that date. During this period however the true solstice fell on 22nd December, and this also was marked by religious feasts. Weill points out that the January date was the true solstitial date at about the end of the Twelfth Dynasty, and suggests that it was at this time that the second Osirian cycle was instituted. He further shows that the 22nd December, the true solstitial date in the Roman period, coincided in the Alexandrine calendar with 26th Khoiak, the traditional day in the Sothic calendar of the Osiris mysteries. From this coincidence he seeks to demonstrate that ultimately the mysteries were transferred from the old calendar to their traditional date in the new Alexandrine system, in order to agree with the solstice, supporting his view by passages from the Edfu calendar and the bilingual Rhind papyri which in his opinion show that the old feasts of 26th Khoiak also had a solstitial character. The appearances certainly are in favour of this supposition, but even though it may be correct for the late period, it is difficult to imagine that the Osiris feasts of Khoiak bore a solstitial character in the earlier times, for the further one goes back in history the further they become removed from the true solstice. As a matter of fact there is no direct evidence of the observance of the solstices at all prior to the Graeco-Roman period; on p. 119 of this book Weill himself says: "Mais le solstice, d'été ou d'hiver, est sans doute, de tous les phénomènes de l'année solaire, celui dont le temps précis est le moins accessible à l'observation simple." It seems therefore improbable that the Osiris celebrations had a solstitial character until very late in history, and equally improbable that a special solstitial festival was inaugurated in the Twelfth or Thirteenth Dynasties.

Although it is inevitable that some of the conclusions reached in this book will not attain universal acceptance, yet it performs a great service in bringing together into a convenient compass the most recent discussions of the Sothic chronology and the religious calendars, the chapters on the Alexandrine calendar and the late religious festivals being of great interest. There are however one or two matters which one would like to see treated at greater length. In the discussion of "short" versus "long" chronology, for example, it would not have been out of place for the author to have summarised briefly the results of his work on the Second Intermediate Period and to have shown how he proposes to fit the long series of names in the Turin Papyrus into the chronology. The possibility of a serious error in the ancient observations of the heliacal risings of Sirius, suggested by Hall in the *Cambridge Ancient History*, is not discussed, and his equation of the "Menophres" of Theon with *Mn-phty-r* Ramesses I is quite overlooked, Weill failing to find a satisfactory identification. Nevertheless, this is a most useful book and it should find a place on the shelves of all who are concerned with the problems with which it treats.

The type used in printing is clear, and misprints are few, but in the hieroglyphic passages quoted the □ p is in nearly every case printed sideways □. This is a small matter which might well be rectified if a second edition of the book should be called for.

R. O. FAULKNER.

The Oxford Excavations in Nubia. By F. LL. GRIFFITH, M.A. *Annals of Archaeology and Anthropology*, XI-XIV. Liverpool, 1924-7.

In 1924 we noticed in this *Journal* (x, 191-3) the detailed reports in course of publication by Professor Griffith of the excavations he conducted in Nubia during several consecutive seasons up to 1913. Our previous notice dealt with those instalments of the report which appeared in the years 1921-3¹, and we

¹ *Liverpool Annals*, VIII-X.

now have to consider the further contributions to the report that have been published by Professor Griffith from that point to the end of 1927¹.

It is notable that in Lower Nubia compact groups of remains occur that belong to well-defined periods, but without apparent link to what precedes or follows them. In the previous parts of Professor Griffith's reports, the relatively abundant remains of the New Kingdom have been dealt with, likewise the numerous but less important finds belonging to the Ethiopian Dynasties², but thereafter there is a complete break until the age of the Ptolemies. The paucity or absence of remains leads Professor Griffith to think that Lower Nubia during these intervals passed out of cultivation and settled habitation³.

Since the Oxford Expedition ceased to operate in 1913, Dr. Reisner has carried on extensive excavations at Napata and Meroe, and his results, combined with those previously obtained, have enabled him to outline a scheme of historical sequence based upon archaeological grounds, since practically no help is to be obtained from written records. According to Dr. Reisner, the Ethiopian kingdom of Napata was forced to cede, or at least to share, its supremacy with Meroe after the reign of Nastasen. Hence the Meroitic kingdom came into existence about 300 B.C., but the 'Meroitic Period' is used by Professor Griffith as a convenient label for the time during which pagan Nubia with its survivals of Pharaonic religion and art was under the influence of the contemporary Hellenistic culture of Greece and Rome, a period which is most marked in Lower Nubia from the end of the first century B.C. to the middle of the third century A.D.

The large cemetery of the Meroitic Period at Faras⁴ was explored in the seasons 1910-12, and yielded a large crop of antiquities. The total number of graves excavated was about 2000, but as many of these had been re-used, the actual number of burials was far larger. Owing to the alluvial nature of the soil, and to subsequent irrigation, the general condition of the graves was bad. Most of them were large enough only for a single interment, but some were spacious chambers which probably had superstructures. A gradual evolution from simple cave-graves to rectangular brick-lined graves can be discerned. So far as can be ascertained from the damaged state of the human remains, it would appear that the bodies had not been bandaged or enclosed in cartonage as was usual during the Ptolemaic period in Egypt and elsewhere in Nubia⁵. From the numerous studs found it seems probable that the bodies were buried in garments, and a few fragments of coarse cloth, sometimes dyed red, were discovered⁶. It further seems improbable that mummification had been attempted, for had it been, it is likely that traces of the molten resin with which Ptolemaic mummies were treated would have survived even in a damp soil. By the complete absence of reference to such traces of resin in Professor Griffith's report, we can be assured that none was found. Possibly the custom may already have been introduced of packing the corpse externally in salt which was the usual method of preservation in Coptic times when burial in garments was also in vogue. If this method had been employed at Faras, the dampness of the soil would have caused the salt to deliquesce, and the body consequently to decay. The objects found in this burial ground are particularly interesting, and include a very fine series of decorated pottery⁷.

Of the superstructures, most, if not all, were of a *mastaba*-like shape, with shrines. All had been plundered, but the fragments recovered from the chambers suggest that the equipment must originally have been rich: in one of these chambers the gold jewellery, reproduced in colour, was found⁸. On the outskirts of the Faras cemetery were found some graves of the type called by Dr. Reisner "X-group." These are of a primitive character and contain contracted burials together with objects of poor quality and workmanship⁹.

In addition to the funerary objects from the cemetery, Faras yielded an interesting series of other remains, the most notable being a fortified enclosure, and a series of antiquities from a palace¹⁰. There are also extensive remains of churches of the Christian period¹¹, and these have well-preserved, though generally fragmentary, wall-paintings, which may be compared with those found by Quibell at Saqqarah¹². A very interesting small church was excavated at the south-east end of the *mastaba*-field of the Faras cemetery¹³. Near this church is a Christian burial-ground, in which the graves are vaults or rectangular chambers with superstructures. It is interesting to note that a regular feature of these graves is the use of whitewash, both on the superstructure and sometimes within the vault. The association of "whited

¹ *Liverpool Annals*, XI-XIV.

⁴ *Op. cit.*, XI, 141 ff.

⁶ *Liverpool Annals*, XII, 59.

⁸ *Op. cit.*, XII, 63 ff. and Pl. xx.

¹¹ *Op. cit.*, XIII, 50 ff., Pls. xxxi ff.

¹³ *Liverpool Annals*, XIV, 57 ff.

² *Op. cit.*, VIII, IX.

⁵ Cf. *Arch. Survey of Nubia*, Report for 1908-9, II, Pls. xx ff.

⁷ *Op. cit.*, XI, Pls. xiv ff.

⁹ *Op. cit.*, XII, 69 ff.

¹² Quibell, *Excavations at Saqqara 1906-7*, Pls. xl ff.

³ *Op. cit.*, X, 119.

¹⁰ *Op. cit.*, XIII, 17 ff.

sepulchres" with Christian burial is very widespread and its use survived in this country almost within living memory¹. Other Christian burial-grounds were explored on the western side of Faras.

On the high desert to the west of Faras is a small group of grottoes dating from the New Kingdom. One of these had been appropriated by a Christian anchorite who had converted the chamber into a decorated cell². On the whitewashed wall is inscribed a series of texts in square compartments. These texts, which have been known since the time of Wilkinson³, have been copied by various modern scholars, and they include the Nicene Creed and the sayings of saints and holy men of the type known to us from the large manuscript collections: in many cases the names and dates of the writers are appended. Another group of Christian sites was explored on both sides of the Nile in the neighbourhood of Faras⁴.

The arrangement of this extensive series of reports, which has now reached an aggregate of 509 pages and 316 plates is excellent, for the account of each locality worked and of the antiquities there discovered is preceded by a history of Lower Nubia during each successive period. By these historical introductions and by his frequent discussion of conclusions, Professor Griffith has rendered the report—which in other hands might have been no more than a tiresome catalogue of sites and finds—a most valuable and interesting account not only of the work done by the Oxford Expedition, but of its bearing upon the history and culture of the localities explored and of the periods that they represent. The colotype plates are excellent.

WARREN R. DAWSON.

A History of the Ancient World. Vol. I. The Orient and Greece. By M. ROSTOVITZ. Translated from the Russian by J. D. DUFF. 418 pp., LXXXIX plates, 36 figs., 5 maps. Oxford Press, 1926.

Orientalists must have turned to this book already with interest. Written by an eminent scholar whose special theme has led to considerable researches in the history of Egypt and Asia Minor in classical times, this book has much to recommend it. The outlook is broad, the style free from the worst vices of the "scientific" history, the translation into English excellent, the illustrations better than in any current book of the kind. The most natural question to ask is, What purpose will it serve? It originated as a course of lectures to Freshmen at a University; but the chief object was to collect Professor Rostovitz's own fundamental views and ideas on ancient history. It is in fact an introduction to an immense subject, but is intended to give a single view, designed both for students and the general reader; it is devoid of the baggage of learning, but has a good bibliography. The book has, then, a unity of conception which will make it attractive reading.

The first part of the work dealing with Oriental history down to Darius occupies about 175 pages, and is a fair and impartial summary. The present writer must confess to having found the section cramped; the effort to put in all the known facts together with a broad view of the historical trend has led perhaps to a lack of that easy mastery noticeable when Professor Rostovitz turns to the classical world. There is little to be said about the statements contained. Time will doubtless bring the necessary corrections. In the next edition doubtless the Kharri or Khurri (p. 67) will be associated with the Subaræans on the score of language; the use of mercenaries (p. 144) should be specially restricted to Egypt, for there is no proof of it in Assyria, or in Babylonia, unless an isolated Greek adventurer be counted such; Persian tolerance of Babylonian religion (p. 153) probably ceased shortly after the reign of Darius, for the widespread destruction of Babylonian temples to be seen at Babylon, Borsippa, Ur, can only be dated to the Persian period; "incantations against these spirits are" *not* "found in thousands among the cuneiform texts on Babylonian cylinders" (p. 166) but on stone amulets and clay tablets—a point of archaeological importance; "Tiamat and his monstrous brood" (p. 167) may be a momentary lapse; I rather doubt the description of the divine symbols as "sceptres" (p. 169, fig. 14). In general, Professor Rostovitz takes a more generous view of ancient Oriental religion than some will be inclined to do; surely the words "...religion passes out of its primitive chaos to order and system; and...its moral and spiritual aspect becomes, especially in the more enlightened classes, more and more predominant over the primitive terror and superstition born of terror" constitute a serious mis-statement of the facts?

May the book pass through many editions! No better fate can befall it than to fall into the hands of schoolboys in leisure hours; we believe that it will give them something that books confined to classical history cannot give, a wider outlook on the ancient world, and a keener appreciation of the true genius of the Greeks.

SIDNEY SMITH.

¹ J. E. Vaux, *Church Folk-Lore*, 2nd ed., London, 1902, pp. 162-3.

² *Topography of Thebes*, 1835, p. 498.

³ *Liverpool Annals*, xiv, 81 ff.

⁴ *Liverpool Annals*, xiv, 97 ff.

The Psalmists. By HUGO GRESSMANN, H. W. ROBINSON, T. H. ROBINSON, G. R. DRIVER, and A. M. BLACKMAN. Edited with an Introduction by D. C. SIMPSON. Oxford University Press, 1926.

The main interest to Egyptology of this group of essays consists in a section written by Dr. Blackman on the Psalms in the light of Egyptian research. This is a sober and dispassionate exposition of the facts concerning the reputed borrowings from Egyptian literature in the Hebrew Psalms. In view of the extravagant statements which have been made on this subject, especially since the publication of the Amenope papyrus, Dr. Blackman's calmly reasoned essay is of very great value. Though not denying the direct influence of Egyptian works on Hebrew literature, he draws attention to the evidence of borrowings in the contrary direction, and attributes to Semitic origins that element in Egyptian religion of the New Empire which consists in the realization of the fact of sin and the need of forgiveness. It is this, combined with the native cheerfulness and love of nature of the Egyptian, which explains the religious outlook of the Eighteenth and following dynasties, "an outlook so closely resembling that of the Psalmists that it can almost be said that the Songs of Sion were being sung in a strange land before they were sung in Sion herself."

T. ERIC PEET.

The Fellāḫin of Upper Egypt. By WINIFRED S. BLACKMAN. London: Harrap, 1927.

Miss Blackman's work is of the highest interest and importance to anthropologists at large and to Egyptologists in particular. For six years she has spent several months annually among the peasants of Upper Egypt, endeavouring to rescue for science information about their methods of life and thought before these become completely deformed and destroyed by being forced into the vulgar and uniform mould of advancing civilization.

One of the difficulties of the sciences of ethnology and anthropology is that their material consists to a large extent of evidence which is, to say the least of it, suspect. Much of our knowledge of the rites and customs of modern tribes rests on the report of traders, missionaries and travellers almost devoid of any equipment which might suit them for the task of collecting anthropological evidence. The two most essential requisites—apart from the more intimate personal qualities such as that aptly styled by Dr. Marett "a genius for hobnobbing"—are firstly a sound training in the principles of anthropology, and secondly an intimate knowledge of the language or languages concerned. With the first Miss Blackman equipped herself by a serious course of study including the taking of a Diploma in Anthropology in the University of Oxford. That she also possesses the second is clear from a close examination of the List of Arabic Words at the end of her volume, where she reveals that scrupulous accuracy and regard for small differences of sound and pronunciation which show that a language has been studied not only with care but with affection. *Si sic omnes!* Miss Blackman possesses also an accidental advantage in that she has constantly at her immediate disposition her brother's erudition concerning the life, and especially the magic and religion, of Ancient Egypt, a store of which she has not failed to make admirable use.

The results of her researches as so far published consist in a number of articles in various journals and the present volume, which is intended as a popular work, and contains only a fraction of the material which she has already accumulated. It is arranged in a readable manner under various well chosen heads. It forms easy and pleasant reading both to those who do not know Egypt and to those of us to whom the guttural bickerings of the Alexandrian dock-labourer as our ship nears the quay are among the most tuneful music in the world.

From the Egyptological point of view the value of the book lies in the fact that so much of what is at first inexplicable in Ancient Egypt receives light and explanation from this study of the modern customs and lore. This is a subject touched on in the last chapter, but one which is naturally capable of much greater development, which either Miss Blackman or her brother will no doubt eventually give it. Its full importance can be best realized by those of us who have excavated an ancient Egyptian town site, such as that of Tell el-'Amarnah, where many features which were obscure to us were at once intelligible to the native workmen, who are still using precisely the same thing in their villages.

The volume is well and fully illustrated. Most of the photographs are quite excellent: a few only, e.g. Figs. 27, 36, 41, 127, and 148, are less good. A photographer friend who saw the book offered the opinion that in some cases the photographer, anxious to get the figure as large as possible, had advanced too close for the focus of the snapshot camera which must of necessity be used for such work, with consequent loss of sharpness to the image. He suggested that rather than do this it would be better to secure a

sharper if smaller image and have it enlarged to the required size. I give this opinion for what it is worth. To my less sophisticated eye, however, it looks as if in some cases at least the old old difficulty of holding the camera steady, which most of us know so well, had caused the defect. Some people get over this by always resting the camera on something solid, others acquire almost at once the trick of a steady grip, and then marvel at those of us who cannot. The anthropologist is occasionally witness of unique scenes, and it is important that he should be so complete a master of the art of snapshot photography that failure is impossible to him.

We welcome the book most cordially, and look forward to seeing not only more of its kind, but also the more specifically scientific work at which Miss Blackman hints. No doubt she is possessed of a divine anxiety to get as much as possible collected before it is lost for ever, but we need not remind her that knowledge stowed away in a scholar's notebooks is often just as effectively lost as that which has never been gathered. It will shortly become her duty to review her position and to make some definite apportionment of her time between collection and publication.

T. ERIC PEET.

A History of Egypt under the Ptolemaic Dynasty. By EDWYN BEVAN. London: Methuen and Co., 1927.

This book, which replaces Mahaffy's work of the same name in Sir Flinders Petrie's series, is to be cordially welcomed as the only up-to-date account in English of the Ptolemaic dynasty. Dr. Bevan, while paying a well-deserved tribute to the work of his predecessor, has wisely decided to re-write the history in his own way, inserting here and there a characteristic passage from Mahaffy in inverted commas. I notice that on p. 352 he has been misled by Mahaffy into confusing the *sakiyu* or water-wheel with the Archimedean screw, but this is an exceptional slip; in general he has sifted the contents of the earlier book very carefully and critically. The dynastic history is recounted in eleven pleasantly written chapters, no easy task, while as an interlude between the reigns of Ptolemy II and Ptolemy III we have a long description, largely derived from papyri, of the internal organization of the country. Dr. Bevan seems to have utilized all the material that has come to light in recent years. Inevitably some of his remarks and judgments will have to be modified when this material has been more thoroughly scrutinized. For instance, the theory (p. 77) that on Nov. 12 or 13, 247 B.C. Ptolemy III became co-regent with his father is already discredited, and I have noted various other erroneous or disputable statements, which are of no great interest except to the specialist. But in the imperfect light of our present knowledge we may say that the author has given us as good a sketch of the Ptolemaic state as the scope of his work permitted. It seems to me a very successful achievement.

Dr. Bevan's views are for the most part sane and sober, but he has propounded one or two new theories on which I find it hard to agree with him. As regards the vexed question concerning the *viós* who appears as co-regent with Ptolemy II from 266 to 259 B.C., he rejects two of the former explanations on the ground that they are irreconcilable with the statement of the scholiast on Theocritus XVIII, 128, that Arsinoe II died *ἄτεκνος*. His own view is that the *viós* was an elder and short-lived brother of Euergetes. But the scholiast has carefully given us the names of the children of Ptolemy and Arsinoe I, and this elder brother is not among them. Nor is it correct to say that Arsinoe II adopted these children. It was the king who adopted her as their mother, probably long after her death. Nor, again, need *ἄτεκνος* in the passage referred to mean more than that Arsinoe died without bearing any children to her last husband. On the whole, the view of Beloch that the *viós* was the son of Lysimachus and Arsinoe accords better with the evidence and with the political situation than any other that has been proposed.

Another new suggestion made by Dr. Bevan is that the *ἀδελφή* who figures in the historical papyrus from Gurob is not Berenice the daughter of Philadelphus, but Berenice the wife of Euergetes visiting her husband "at the front," or rather, it would seem, directing military operations from Antioch before her husband had arrived there with the main Egyptian force. A romantic conjecture, but the Gurob text remains to me a mystery.

In discussing the *ἀπόμοιρα*, the tax which in year 23 of Ptolemy II was taken over from the temples by the government and devoted, at least nominally, to the maintenance of the cult of Arsinoe Philadelphus, Dr. Bevan has overlooked one important fact. The *ἀπόμοιρα* was a tax on orchards and vineyards, and the transfer took place just at the time when the government was endeavouring to make Egypt a great fruit-growing and wine-producing country. This appears very clearly in the Zenon correspondence, more especially in the letters of Apollonius the dioecetes. More than that, the papyri show that all or almost all

the new vineyards and orchards were in the hands of the Greek settlers. We cannot say how much of the *ἀπόμυρα* was paid by foreigners, but certainly it must have been a very large proportion of the whole amount. Was it equitable then that these people, who were developing the land with the encouragement of the government, should be heavily taxed for the benefit of a religion which was not theirs? It seems to me that the king was perfectly right not to allow this unearned increment to flow into the coffers of the Egyptian temples. But in fact the action which he took was a compromise. He retained the tax, but diverted the proceeds to a State cult in which all classes of the population were obliged to take part. During his reign the Arsinoeia was a very great festival, at which every man was expected to sacrifice according to his means, and no doubt the government maintained the service of the cult, not only at the festival but throughout the year, with a lavish hand. But it is probable that even from the first the proceeds of the *ἀπόμυρα* were far greater than the current expenditure on the cult and that the king had a large balance at his disposal.

The reform of the Egyptian calendar, as proposed by the priests in the Canopic inscription, is ascribed to a Greek brain in Alexandria, supported by the royal will (p. 207). This seems an unnecessary assumption when we reflect that the Egyptians were quite capable of devising the required adjustment and that the object of it was to stabilize the recurrence of their own festivals with reference to the solar year. Why should we suppose the Alexandrians to have troubled about the slight imperfection of the Egyptian calendar, which they had not yet begun to use in Alexandria, when we know that they neglected to regularize their own calendar, in which the dated festivals moved round the seasons with far greater rapidity than in the Egyptian year? Moreover, if the reform had been ordered by the king, it would have been effected; if the government had taken a serious interest in it, the leap-year holiday would have been officially instituted and maintained.

The author has done well to drop a large number of the illustrations which appeared in Mahaffy's book and to add a certain number of more interesting ones. With regard to the colossal figure of the young Alexander (fig. 8) he might have quoted a curious demotic dating, published by Reich in the *Philadelphia Museum Journal*, in which this very statue is spoken of. The extravagant coiffures shown in fig. 23 are not earlier than the 2nd century A.D. and are copied from Roman models; the Alexandrian women of the Ptolemaic age are not to be debited with such bad taste. A better choice would have been the charming faience head of a queen, inadequately reproduced in *Naukratis II*, Pl. 17, and now in the British Museum.

C. C. EDGAR.

Vie de Petosiris, grand-prêtre de Thot. By ÉMILE SUYS, with a preface by JEAN CAPART. Brussels: Fondation Reine Élisabeth, 1927. Pp. 158. 6 plates.

One of the most interesting Egyptian discoveries of the last ten years was that of the magnificent tomb built by the high-priest of Hermopolis, Petosiris, for his father Nesishu and his elder brother Zedthotefonkh, his predecessors in the high-priesthood (he himself was also buried in the tomb) at Derwah, near Ashmûnên, which has been published *in extenso* by M. Lefebvre (*Ann. Serv.*, 1920, 41 ff.; *Le Tombeau de Petosiris*, Cairo, Service des Antiquités, 1923-4). Its reliefs are of extraordinary importance on account of their combination of Greek with Egyptian elements; they are documents inestimable in the history of Egyptian art as proof that Greek art could and did influence Egyptian artists in a way and to an extent we had hardly deemed possible hitherto. No doubt there were other examples of this really Graeco-Egyptian art besides the tomb of Petosiris. We have examples of its earlier stages in the tombs of Zanefer and Psamatik-nefer-seshemu, described by Maspero; but in none is the foreign art so largely adopted as in that of Petosiris. Yet we see that the artist is an Egyptian. He was not a Greek imitating Egyptian motives. He was an Egyptian openly and intelligently expanding his artistic repertory by the admission of the artistic ideas of the foreign rulers of the land, and doing it more successfully than his successors in the Roman period, not at all unnaturally, in fact. The result can be seen in M. Lefebvre's plates, of which examples are reproduced in the rather curious book before us by Père Suys, who at the instance of M. Capart, who prefaces it, has written it to popularize not only the art of Petosiris's sculptor, but also, apparently, Petosiris himself, who does not really interest us so much. However M. Suys gives us a more or less imaginative sketch of the probable life of Petosiris, which takes a good deal for granted, especially as regards the precise period at which he lived. We agree that the probable period of his life is the latter part of the fourth century B.C. It is a very probable deduction from the style of his artist, which can hardly be any later than the very beginning of the Ptolemaic period, owing to the comparative purity of

its Egyptian elements, but, on the other hand, cannot possibly be so early as the date to which M. Montet ascribes it (*Rec. Arch.* 5^e série, t. xxiii, 1926, 161 ff.), *c.* 500 B.C., on account of its strongly emphasized Greek elements, which, besides, show no trace whatever of archaic Greek style: a mere glance at M. Suys's Plate i is enough to show the veriest tyro that the Greek art initiated is that of the fourth, not the sixth century B.C. I see no reason to suppose that this relief (which is strongly Graecizing, but not pure Greek) is of any later date than the rest of the tomb, though M. Suys apparently does (p. 18). If this is so, we are afraid that M. Montet's learned argument about the calendar must go to the wall in face of the facts of Greek art, and we agree with M. Lefebvre's date for the monument, *c.* 300 B.C., which is also followed by MM. Capart and Suys. But there are *imponderabilia* to be considered, nevertheless. We do not *know* that Petosiris was a contemporary of, let us say, Ptolemy Soter, though with M. Lefebvre, we think it extremely probable that he was, and that the foreign tyranny to which he refers in his inscriptions was that of Artaxerxes Ochus. But he might be later: a fine artist like his might have lived in the third century: there is nothing in his Graecizing style against this, though his Egyptian style seems a little too good. And he may have been referring to the Macedonian conquest, though this does not seem probable. The possibility however remains, just as does the other possibility also, that the reliefs may date earlier in the fourth century, as early as the time of the Nectanebos, and that it is the earlier Persian domination that he refers to. So that it is perhaps a little risky to speculate too much as to what events in the history of Egypt Petosiris may have seen or taken part in. The book therefore lacks the element of reality, and is to be treated not as a serious contribution to archaeology, but as a didactic romance, of admirable intention and undoubted use as a means of interesting the unlearned in Egyptian matters. The only thing that is really interesting, however, in connection with Petosiris is the extraordinary style of his tomb sculpture, and on this M. Suys does not, we think, lay nearly enough stress. We note an error on p. 19, on which, referring to Plate vi, the mummy-case of Petosiris is said to have the head "coiffée de la perruque royale (*klaft*)": it is, of course, not the royal headdress *nemes* (the so-called "*klaft*," which was incidentally not a wig at all, but a hair-bag), but the usual conventional coiffure of the dead. And why, on p. 14, should the writer of the Greek graffito *Φιβίς Ἀπολλωνος* be "Phœbis, fils d'Apollon": the name is the Egyptian *Phib*, "the ibis," and has nothing to do with Phœbus, although his father was called Apollōn (=Hôr). "Phœbis" in Greek would have to be a feminine name.

H. R. HALL.

L'Art égyptien. Par CHARLES BOREUX. Bibliothèque d'histoire de l'art; Paris and Brussels, Van Oest, 1926. Pp. 62; 64 plates.

Monsieur Boreux has written a very acceptable appreciation of Egyptian art in its chief aspects at all periods, as preface to an interesting anthology of pictures of Egyptian works of art of all kinds, arranged in 64 plates. Naturally and rightly he has chosen the majority of his examples from the collections of the Louvre, now, since the regretted death of the late M. Bénédite, under his care. The remainder are chosen from the Cairo Museum, with the exception of two from Berlin (Nefretiti, of course, and an 'Amarnah relief), two from Turin (Ramesses II and a Sebennytite royal head), and one from Florence (the well-known Nineteenth Dynasty stone head of a lady). The British Museum does not appear at all in the plates, and its name is not mentioned in the preface, so far as sculpture is concerned; for although the portrait-statues of Sesostri III from Dêr el-Bahrî are mentioned, no hint is given that the three best of the four are in the British Museum. In other branches of art the only objects in our national collection to which reference is made are the famous little ivory statuette of a First Dynasty king (No. 37993) found by Petrie at Abydos, and our "cuillers-à-fard," which were published not long ago in the *Journal* (xiii, 7 ff.) by Mme Frédéricq. The great blue glaze *was-sceptre* in the Victoria and Albert Museum (placed there by Petrie on account of its remarkable technical interest as a triumph of glazing) is also mentioned. We are surprised that one at least of the Prudhoe lions was not illustrated, and that the little ivory king was not illustrated as well as mentioned, for there is nothing like him of his date anywhere else. However, one knows the difficulty of compiling an anthology such as this, and everyone has his own preferences in art. It is impossible to satisfy everybody, and we are grateful to M. Boreux for his admirable selection of the masterpieces of the Louvre and of Cairo. Of those of the Louvre that are not well known here, we welcome, for instance, the fine Fourth Dynasty head of king Dedefrêç (Didoufri), Pl. xx; the bust of Akhenaten, Pl. xxxviii; the granite group of Tutankhamûn and the god Amûn (Pl. xli), of which the only drawback is the fact that the king's head is broken off: the face of the god however is no doubt an idealized portrait

of him ; and, above all, the remarkable little portrait-head of a princess in two shades of blue glass, of about the time of Amenophis III (Pl. lxi). From Cairo, besides the well-known masterpieces, we welcome the small statue of Amenemmes III from Karnak (Pl. xxx). The Tutankhamūn treasures are well represented by two plates (lv, lvi). From the Louvre we are given the old favourites, such as the always cheerful and welcome little "scribe accroupi," and the rest, including that remarkable head of a man of high cheekbones in painted limestone from the Salt Collection (Pl. xxii) which is always ascribed (as it is by M. Boreux) to the Fourth Dynasty, though personally I believe it to belong to the end of the Eighteenth. It seems to me that the piercing of the ears makes it impossible to date it before the middle of the Eighteenth at earliest: and its general appearance otherwise inclines me to ascribe it to the time of Akhenaten, or at any rate to that of Amenophis III. I notice that M. Boreux accepts the current attribution of a well-known royal head at Copenhagen to the Twelfth Dynasty (p. 24): it seems to me (it also does to von Bissing and to Weigall) to be undoubtedly late Saite or Sebennytite (see *Journal*, XIII, 66), like another rather similar head at Bologna, which is or was unaccountably regarded there as a portrait of Horemheb (1), but is certainly Sebennytite or even possibly early Ptolemaic. These two are the only criticisms of date-attributions by M. Boreux that I would make, and they are merely matters of opinion, of course. There appears to be a slip on p. 33, where M. Boreux speaks of the bust of Nefretiti at Berlin as "passé d'Égypte en Allemagne pendant la dernière guerre, et exposé depuis quelques années au Musée de Berlin." But how could it be possible for anything to pass from Egypt to Germany *during* the war? The bust with the other things from El-Amarnah can only have gone to Berlin *before* the war, in full time of peace.

H. R. HALL.

Die Kunst der Ägypter. Von GEORG STEINDORFF. Leipzig, Insel-Verlag, 1928. Pp. 104, 17 text-illustrations, and 200 plates.

Prof. Steindorff's book is more catholic than M. Boreux's. The majority of its illustrations are of objects at Berlin and Cairo, it is true, as most of M. Boreux's are at Paris and Cairo; but Prof. Steindorff does not ignore England wholly; both the British Museum and the Ashmolean contribute representative pieces to his plates. One of the Prudhoe lions appears, for instance, and an example of the archaic objects from Hierakonpolis at Oxford. Several objects from the Louvre are given, including, of course, the "scribe accroupi."

Prof. Steindorff's book is very up-to-date. He not only includes most of the chief of Tutankhamūn's treasures in his repertory, but also the lately found statue of king Zoser at Saqqārah: the first good illustration we have seen of it (p. 173), showing well the strange and clumsy shape of the *nemes*-headdress at that early period, and giving a good idea of this rather terrifying, spectre-like figure. Then at the other end of the scale he includes the strange reliefs of the tomb of Petosiris at Derwah, with their mixture of Egyptian and Greek art and their delicate arabesques, reminding us of nothing so much as of the wall decoration of some Italian house of the cinquecento. The Middle Kingdom Mēr reliefs appear, and it is interesting to compare them with Petosiris or earlier Saite work. The Old Kingdom is well shown. 'Amarnah naturally bulks largely, and is well illustrated with several of the famous casts from the living and from statues found in the "House of the Sculptor." So also is the late Eighteenth Dynasty generally. Is it certain that the head of a king on p. 211 is really of the Eighteenth Dynasty? It does not give me that impression, though I should not like to date it. The head of a young man at Florence on p. 212 is called by Prof. Steindorff a "Mädchenkopf," as it was by Frau Fehheimer (*Plastik*, p. 63, "Kopf einer Frau"). To me it has the face of a young man, not of a woman, and the method of wearing the hair parted in the middle was used by men under the Eighteenth Dynasty, as we see from the statue of Amenophis, son of Hapu (p. 214), and that of Horemheb at New York, published by Winlock in *Journal*, x (1924), Pls. i-iii, and naturally flowing in the same way under the Twentieth, as we see from the sketches of the painter Hui published by Erman in *Zeitschr. f. äg. Spr.*, XLII (1905), 130, and Spiegelberg in *op. cit.*, LIV (1917), 78. Can it any longer be maintained that this head is that of a woman, in face of the Horemheb statue which it so closely resembles? We may regret that Prof. Steindorff did not include that statue in his anthology, for America would be better represented by it than it is by the gold Amūn from the Carnarvon collection in the Metropolitan Museum (p. 219). The collection of famous reliefs of the time of Amenophis III and Horemheb at Berlin, Leiden and Bologna is most welcome.


Of Saite sculpture one is inclined to doubt whether the head of an elderly priest on p. 258 is not later

than "um 500 v. Chr." From the extraordinarily naturalistic style, especially the quite un-Egyptian treatment of the ear, I should myself be inclined to date it rather about 350.

Prof. Steindorff includes the smaller arts in his scope, and illustrates them well. The golden dagger of Tutankhamūn and the chased gold sheaths appear for the first time in a general work here. And we may specially commend his beautiful illustrations on p. 275 of four of the finest examples of Eighteenth Dynasty blue glaze bowls that are known. One with a figure of a girl squatting on a cushion and playing a rabab, with a monkey at her side, beneath a trellis of plants, is surely unique: almost Persian in effect. Personally, I could have dispensed with those dreadfully tasteless and ugly painted alabaster monstrosities of Tutankhamūn's, pp. 271-73; *mais chacun à son goût*. The translucent lamp with its picture (p. 272) is at any rate a *Kuriösum*; but the lion on the lid of the box on p. 273 looks as if he were a sweetmeat, and intended to be eaten. Egyptian taste was not always impeccable, and personally I would not be the one, in *my* anthology, to draw attention to its lapses. However, let us make up for this with the beautiful little wooden "Salbschalen" or "Cuillers-à-fard" of pp. 283-4, and the "Spiegelkapsel" of p. 287, not to speak of our well-known old friends of the grand time of the Twelfth Dynasty, the gold-work and the jewels from Dahshūr (pp. 291 ff.).

Like M. Boreux, Prof. Steindorff includes architecture in his scope, and gives a good selection of views of buildings of various periods, including the recently discovered Third Dynasty buildings at Saqqārah.

Needless to say, his text, forming a complete introduction to his plates, is admirably written and will be most useful alike to the archaeologist and to the general reader. His description of the development of the tomb-temple is specially clear.

A translation of the book, with an anglicized transliteration of the Egyptian names (avoiding the German "ch" and "j" and such forms as "Edjōjet" or even "Wedjōjet" (p. 193) for king ) and with additional plates illustrating the British Museum more worthily, would probably find a considerable sale here. It could not of course be recommended without these additional plates. A book on Egyptian art, if published in England, should devote more space to examples in our collections. But we wish cordially to acknowledge Prof. Steindorff's courtesy as well as acumen in publishing those English objects that he has included in the German edition.

H. R. HALL.

Animals of Ancient Egypt. E. By DAVID PATON. Princeton University Press: Humphrey Milford, Oxford University Press.

The conception and intended scope of this work are undoubtedly good, but the production and style are so poor that we are afraid it will be of little use to the student. Although this book is the first volume of the series, no introduction descriptive of the method of its use has been given. The chief fault, however, lies in the illustrations and the hieroglyphic text. The figures of the animals to which the text refers should have been reproduced on a much larger scale, and where it is possible notes of the colouring should have been added, so that the reader would easily be able to distinguish the peculiar features of each type. To take one example, page 2, nos. 6 and 7. Where is the distinction between E. 3. A. and E. 3. B.? The illustrations in the text are much too small and very badly drawn. On page 23 (E. 72. B.) we have a copy of Mrs. Davies's painting of a hippopotamus at bay from the tomb of Amenemhēt. This is a typical example of the careless drawing and absurdly small scale of the illustrations throughout this work. To sum up, Mr. Paton's book puts us in mind of a student's note-book, quite intelligible to the writer but of little value to the reader.

W. B. EMERY.

Thebes. The Glory of a Great Past. By JEAN CAPART and MARCELLE WEBBROUCK. London, 1926.

This comprehensive survey of the Empire capital of Egypt will be of great value both to the specialist in Egyptian art and architecture and to the visitor who hitherto has been only able to turn to Baedeker for reference.

The photographs are excellent, both in quality and selection, and M. Capart is himself to be congratulated on a number of these which come from his own camera. We notice a mistake on page 250 which is of some importance. "Ramosis was in office at the end of the reign of Amenophis III and during part of the reign of his predecessor." Surely this last word should be successor.


In the event of a further edition of this book we would like to suggest the insertion of a number of plans of the temples and tombs, which would be of immense value to the visitor to Egypt.

For a non-specialist work on Thebes this book is unique.

W. B. EMERY.

Relazione sui lavori della Missione Archeologica Italiana in Egitto (Anni 1903-1920); II. La tomba intatta dell' architetto Kha. By E. SCHIAPARELLI. Torino: R. Museo di Antichità, 1927. Pp. 187; 169 illustrations.

One of the most pleasant variations of a ride through Western Thebes is to turn up sharply to the left between Medinat Habu and Kurnat Mur'ai into the Valley of the Queens' Tombs and then strike off right up the little desert valley that leads to Dêr el-Medīnah. Crowds of tourists are left behind: one is in the real solitude of a rocky desert valley, along the side of which our narrow path runs to the head of the little pass, where stands within its high wall of unbaked brick the little temple of Dêr el-Medīnah. Further on the path, avoiding the enormous hole which was dug probably for the tomb of some noble or king of the Eleventh Dynasty, goes on by the rocky dale behind Shêkh 'Abd el-Kurnah to Dêr el-bahri. In this region fruitful tomb-excavations have been carried on by the Americans and the Italians, and more recently by the French. The excavations of M. Bruyère and of Dr. Schiaparelli in the valley were situated near the temple of Dêr el-Medīnah and between it and the Valley of the Queens, where Schiaparelli had already dug. The present volume describes the important contents of the intact tomb-chamber of Kha, a chief royal architect under the Eighteenth Dynasty, and of his wife Meryt, which was discovered and excavated in 1906. The chapel of this tomb (No. 8) has always been known: for references see PORTER and MOSS, *Topographical Bibliography*, I (*The Theban Necropolis*), 57. The objects found in the chamber have been at Turin for twenty years, and it is odd to our thinking that their publication should have been delayed for twenty years. But all things come to those that wait. However, by this delay Schiaparelli has missed his market. Tutankhamûn has intervened, and our appetite for the contents of intact Egyptian tombs has been somewhat jaded. However, despite Tutankhamûn and Iuya and Tuyu, the contents of the tomb of Kha are of very great interest, and tell us several things that we did not know before or illustrate more completely things that we did know.


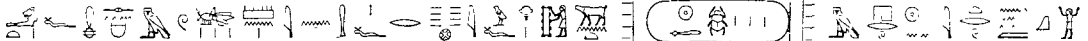
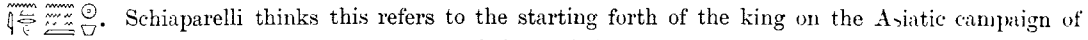
Kha, the , was a chief royal architect at the end of the reign of Tuthmosis III, confirmed in office under his two successors, and died in the reign of Amenophis III. If he died about 1405 B.C. and was already chief of the works under Tuthmosis III, i.e. before 1450, he will, if he was appointed to his office at about the age of thirty, about 1460 (let us say), have been eighty-five at his death, which is a good age, quite good enough, one would think. But Schiaparelli for some reason (p. 190) makes him born under Tuthmosis I, which would mean that he was at least a centenarian at his death, probably about 110 years old, which is not at all probable. It would be interesting to have his mummy examined; but this Schiaparelli tells us nothing about: there is no description in the book of any scientific examination of it. It is not probable that he was more than 85, and he may have been five years younger, at his death. Nor is there any description of the mummy of Meryt.

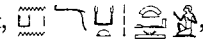
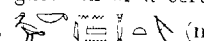


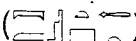

Of their splendid coffins (Figs. 17 ff.), however, and of the remarkable objects buried with them, Schiaparelli gives general descriptions and very good photographs. The contents of the tomb were found heaped up much in the same way as they were in the tomb of Tutankhamûn, so that the chamber looked much like a furniture-repository. The same linen covers were found stretched over important objects, such as the coffins. The funerary papyri, which are very finely written and vignетted, are fully described and illustrated (Figs. 31 ff.). But the discoverer thinks too much of the wooden figure of Kha (Figs. 32 ff.), which is not a good example of the art of the time.


The chair on which it was found standing with some ushabtis (Fig. 38) is a good example, the other furniture numerous but normal, with the exception of a little "garden-table" of reed (Fig. 103) which might have come from modern Japan. The many and various funeral boxes are all good and interesting. But (with the exception of the golden cubit, to be mentioned later) the most interesting things of all in the tomb are the clothes, bedclothes, towels, etc., of which there were a great number, placed in rolls (Figs. 64-67). The clothes especially are most interesting and rather disconcerting: they do not quite tally with ideas derived from the statues and paintings. The heavy winter sleeveless tunics, for instance, are a surprise, so are the coloured borders, and, to a less extent, the long fringes. We should have liked Schiaparelli to illustrate lay-figures with some of these things on, to see how they look. Of course one has to allow for starching and gauffering, which would make a difference in their appearance. A queer touch is the laundry-mark on each garment. Meryt's wig (Fig. 74), with its cover and basket, is a good example of its kind.

Of the vases the painted pottery funnel (Fig. 45) is unique, and most interesting, as are also the metal strainers, Fig. 52, with the accompanying drinking-apparatus of metal and fayence. We can compare the leaden drinking-siphon with its strainer-end found at 'Amarnah in 1921 and now in the British Museum

(No. 55,148; exhibited in the Fifth Egyptian Room, case E). Of the pottery Schiaparelli notes (p. 140) forms almost indistinguishable from some of the Middle Kingdom; another proof of the shortness of the period separating the Twelfth from the Eighteenth Dynasty. The metal vase-stands are very fine, especially one in openwork that proves the Eighteenth Dynasty date of the similar but more elaborate stands at Leipzig published by Steindorff (*Blütezeit*², p. 146; and *Kunst der Ägypter*, p. 300) as Eighteenth Dynasty, which otherwise might have been thought to be Ptolemaic. The wash-hand basin and ewer of bronze (Fig. 117) are singularly beautiful, and might well be Japanese. The wooden case of the curious leather object (Fig. 51), supposed to be a level, looks oddly Roman or Coptic with its incised design, but the zigzag round the rosette is not Roman. The most interesting instrument, and in some ways the most valuable object found in the tomb, is the golden cubit-rule with inscriptions of Amenophis II, referring to his opening of royal buildings at Hermopolis, which was no doubt presented to Khaḥ by that king on that occasion (Figs. 155, 156). "È...di lamina d' oro, sostenuta internamente da anima di legno" (p. 168). The incised inscriptions are very unusual, especially that referring to Hermopolis:



. Schiaparelli thinks this refers to the starting forth of the king on the Asiatic campaign of his second year (c. 1446 B.C.): on his way north from Thebes: "Came H.M., his heart rejoicing, into the house of his venerable father Amūn. His soldiers with him were as locusts. He stayed at Hermopolis; he built (*sic*) the walled house of ʿAa-kheperu-Rēḥ on the second day of the inundation, when the river rose at the time of (its) widening." It is not a case of a 'piccolo tempio,' as Schiaparelli says, but of a secular building, probably little more than a walled royal kiosk. No doubt Khaḥ built it, but whether he did it in one day we do not know. Perhaps he did, and that was why he was given the golden cubit-measure.

Another present from royalty was a small handled saucer of electrum, with the incised pphenomen of Amenophis III (Fig. 157), no doubt given to Khaḥ in his old age as a mark of the young king's favour, and with a further inscription in black, , added after his death, unless it was a special post-mortem gift from the king's store of such things to the funeral equipment of his distinguished subject, which is equally possible. A scribe's palette with inscription of Amenmes, a very important court officer, flabellifer on the right hand, superintendent of all the works of the palace and of the treasuries, decorated with the golden fly, in the reign of Tuthmosis IV, was no doubt a present from him to his more humble colleague. But the great situla (Fig. 158) with the inscription of the scribe Userḥet, priest of the deceased queen Mutnofrit and *hem-ka* of the princess Sitamūn, was perhaps not a present from anybody, though we do not know how it came into Khaḥ's possession: it was made probably some time before he was born, about a century before it found its last resting-place in his tomb. Other objects in the tomb cited by Schiaparelli as presents can hardly be such: we may instance the draughts-box of a certain rather reverend gentleman, devoted to the service of Amūn, named Mery-benret,  (not 'Benermerit,' as Schiaparelli says; which would be a woman's name), which bears funerary inscriptions for Mery-benret, and so was no business of Khaḥ's, properly speaking. Nor had it, properly speaking, anything to do with another person, the superintendent of the king's works Neferḥebef, who is represented on it seated with his wife and receiving funerary offerings from his son, whose name, so far as I can read it from the illustration (Fig. 161) is Mery-benret. I may be wrong, as it is difficult to see, and Schiaparelli does not give the name of the son, which however is certainly , and so presumably , although this has not occurred to Schiaparelli. It explains the occurrence of the names of both Neferḥebef and Mery-benret on the same object: Mery-benret commemorates his father and mother on his own funerary draughts-box. Besides this box, a walking-stick with a long funerary inscription of Neferḥebef cut on it was also found in the tomb, and the stick of a Khaḥemuas, who bore the same title () as Khaḥ. Now Khaḥ may be the same person as Khaḥemuas: names were shortened at that time in this way: we may instance User-Amūn, of tomb No. 131 at Shēkh 'Abd-el-Ḳurnah (recently published by DE GARIS DAVIES, *Bull. Met. Mus. N. Y.*, 1926, II, 42) who was usually called plain 'User.' So we may discount the separate existence of this Khaḥemuas, and suppose with reason that this stick was a present to Khaḥ from himself, or rather from his executors, as it too bears a funerary inscription () like the stick and draughts-box of Neferḥebef and Mery-benret. The most probable explanation of the existence of the two latter objects in Khaḥ's tomb is that it was not originally made for Khaḥ, but housed the burials of Neferḥebef and his

son Mery-benret, who were evicted from it for some reason by Kha^c, when two pieces of their tomb-furniture were left behind. The fact that Neferhebef was apparently a predecessor of Kha^c in office (he was ; p. 179), may or may not supply a hint as to motive. He lived not very long before Kha^c, for the inscriptions of Mery-benret are to my mind no earlier than the reign of Tuthmosis III, though the scene of offering to Neferhebef looks older. The only other explanation is that Kha^c bought from the maker the draughts-box which Mery-benret had had inscribed for his and his father's tomb, but had rejected for some reason, and that Kha^c forgot to substitute his name on it for that of the original owner, before he died, and his heirs omitted to do so after his death. Such an explanation, although possible in the case of one thing, becomes less probable when we are dealing, as now, with two: for Neferhebef's stick has also to be taken into consideration. Anyhow there can be no question of any present from a benevolent friend of Kha^c's in this case.

Among other things in the tomb the provisions are also worthy of special notice, especially the loaves and above all the cakes and biscuits in various forms, three-cornered scones (like the loaf from Dêr el-bahri [Brit. Mus. No. 40,942], published by me in NAVILLE and HALL, *Deir el-bahari, Xlth Dyn.*, III, p. 24, pl. xix), *hes*-vases, figs, papyrus-flowers, †-signs (?), and goats (Fig. 135), reminding us much of the similar "mixed biscuits" found by Sir Aurel Stein at Astana, near Turfan in Chinese Turkestan, and dating from the T'ang Dynasty, c. 650-750 A.D., which were exhibited at the British Museum last year.

A very remarkable thing is an alabaster vase in which is a medicament: an oil or ointment (p. 154) containing iron and morphine ("un grasso di natura vegetale, continente ferro ed oppio"). The opium is understandable; but the iron is a surprise. However, iron was now well known to the Egyptians, though very precious, as the dagger of Tutankhamûn shows so far as arms are concerned. And it would appear that its medical use was also known.

There remains little more to be said with regard to the objects found, except to mention a formidable leather truncheon left behind by a taskmaster of the workmen (Fig. 14) and to note that there is a contribution to the vexed question of Egyptian lighting in a bronze lamp in the form of a bird, mounted on a slender wooden stand in the shape of a lotus-column (Figs. 127-8).

The outer chapel of brick, originally pyramidal, which has been known since the time of Wilkinson, was well painted, so far as the vaulted roof is concerned (Figs. 164, 166), and has recently attracted the attention of Mr. DE GARIS DAVIES (*Bull. Met. Mus. N. Y.*, 1922, II, 51). The stele "che da oltre un secolo fa parte delle collezioni del Museo di Torino" (p. 184), where it is No. 162, is remarkably poor. On it Kha^c and Meryt receive offerings from their son Amonemopet (Fig. 165).

From the above it will have been seen how interesting the contents of this tomb are. Schiaparelli's account is easy and flowing, but lacks precision. It is readable, which too many accounts of excavations are not, and which this deserved to be. But it is not scientifically precise. We do not want the whole book to be a dry catalogue; but we do ask nowadays for an inventory of all the objects found, with the measurements of everything, and we do ask for the complete text of every inscription, so that one has not to guess at a reading with a magnifying-glass as in the case of the probable name of Mery-benret in the scene of the offering to Neferhebef and his wife on Mery-benret's draughts-box (above, p. 204). And in the illustrations we do ask for a scale against every object. Schiaparelli not only does not give us a single one, but he does not mention in his text the measurements of all the objects described, by any means. Schiaparelli is an Egyptologist of the older school, and the strict discipline in these matters of the younger archaeologists (which to them is second nature) is not adopted by him. Apart from this, however, we have nothing but praise for this fine publication. Schiaparelli may be of the older school, and so lack the scientific precision that the younger school demands, but he is an Egyptologist of great position and knowledge, and he has given us of his best in this edition of the treasures of ancient civilization which he was lucky enough to discover in the tomb of Kha^c, and which the museum of Turin is to be congratulated on possessing. We cannot close this appreciation of the book (which the Ministry of Public Instruction, General Direction of Antiquities and Fine Arts, has forwarded to us through the Embassy and the Director of the British Museum) without a further reference to the excellence of the photographs and of their reproduction in photogravure, which is a credit to Italian workmanship. We wish we could say the same of the printing of the hieroglyphs, which is very bad: they are of an ancient fount, and sometimes look as if they were wood-blocks. The other printing is so excellent that we would suggest that Schiaparelli should not in future disfigure his books with so bad a fount, but should advise the "O.P.E.S." (his printers) to invest in Dr. Gardiner's new fount which we use in the *Journal*.

Kinderspielzeug aus alter Zeit. By KARL GRÖBER. Berlin. 1927.

Dr. Karl Grober, of Munich, has published with the *Deutscher Kunstverlag*, of Berlin, an interesting volume on children's toys of all ages from Twelfth Dynasty Egypt to the nineteenth century, which devotes a short section to ancient Egyptian toys. Several examples in the British Museum are illustrated, notably the well-known wooden walking lioness with the moveable lower jaw (No. 15671), the jerking toy (on the monkey-on-a-stick principle) of a bound and prostrate negro prisoner being worried by a hound (No. 26254), and several dolls. The lioness is described as a tiger: although the toy is of the Roman period, when the tiger had no doubt become known to the Egyptians, we think it more probable that a lioness was intended. The prisoner-and-hound toy, which is of the Nineteenth Dynasty or possibly of the Eighteenth, throws rather an unpleasant reflection on the sort of royal pastime that was considered appropriate then to be reproduced as a child's toy. Other toys illustrated, of the same type, are the very remarkable wooden ichneumon (mongoose) pouncing on a snake, in the Leyden Museum, the early figure (Twelfth Dynasty?) grinding corn or kneading bread, also at Leyden, and the crocodile with moveable lower jaw (Roman) at Berlin. The common Roman horses on wheels of course appear. But of the two supposed toys from the Louvre, a stone lion and faience hedgehog mounted on wooden four-wheeled carriages, we believe that the lion and the hedgehog cannot originally belong to the carriages. These are no doubt both Roman; but the hedgehog is Saite and the lion is difficult to date, but probably not Roman. We believe that here is an example of the way in which in pre-archaeological days unrelated things were often put together to "look pretty." Whether the lion and the hedgehog themselves are to be regarded strictly speaking as toys is doubtful; certainly the Sixth-Eleventh Dynasty wooden figures of servants, also illustrated, are not: they are, of course, funerary models, placed in the tomb, and should not have been included. The book is finely got up, the photographs are excellent, and the descriptive text interesting.

H. R. HALL.

I papiri ieratici del Museo di Torino. Il Giornale della Necropoli di Tebe, Vol. I, a cura di GIUSEPPE BOTTI e T. ERIC PEET (fascicolo I). Torino, Fratelli Bocca editori, 1928. (Obtainable from Hodder and Stoughton, London, and Geuthner, Paris.)

The appearance of this first part of a systematic publication of the papyri of Turin, one of the most important collections of ancient Egyptian papyri in existence, is certain of a warm welcome from Egyptologists. So fragmentary is the condition of most of the papyri that an adequate publication of them was hardly possible until now when Egyptology has exercised itself upon them more or less for a whole century, and a combination of skill in reading the hieratic, fitting the fragments and reproducing the result by photography has found also a publisher willing to undertake the heavy cost of issuing the work.

While, in November 1824, Champollion was at Turin studying the Drovetti collection of Egyptian antiquities, he relates that after examining those papyri that were well preserved he was brought to a table ten feet long covered "at least six inches deep" with fragments. In this heap of hieratic writings (only some thirty months after his first decipherment of a hieroglyphic sign!) his practised eye and keen intelligence recognised the remains of a chronological list of kings and many other important documents bearing royal names, discoveries which he briefly describes in his *Seconde lettre au duc de Blacas*. In 1826-7 the erratic scholar Seyfarth extracted from the mass every fragment of the Papyrus of Kings and fitted them all together with great ingenuity in a series of which first Lepsius and then Gardner Wilkinson published facsimiles. Forty years after Champollion's visit a new period of activity commenced. Lepsius, Lieblein, Chabas and Devéria published some important documents from the collection, and in 1869-76 Rossi, the acting director of the museum, having summarily catalogued the fragments and supplied Pleyte in Holland with tracings of many of them, the latter issued no less than 158 large plates of facsimiles with commentaries and translations.

About thirty years ago Professor Schiaparelli, the present director of the museum, began a systematic sorting and fitting together of the fragments, most of which proved to be of the Twentieth Dynasty. Signor Botti in his spare time has continued this work (excluding only the fragments of funerary documents) and has lately published notes of several very interesting discoveries—remnants of a register of households, and of a hymn celebrating the deeds of Tuthmosis III in Asia, a precursor of the so-called "Poem of Pentaur" of Ramesses II. Now, collaborating with Professor Peet, our tireless Editor, who as we all know has made a special study of the judicial papyri of the Twentieth Dynasty, Botti has begun the

publication, commencing with a group of fragments which has been brought into a final state of preparation, the publishing house of Fratelli Bocca most nobly supporting the enterprise.

The necropolis of Thebes with its sumptuous private tombs and its fabulously rich royal sepulchres was a centre of great activity during the New Kingdom and the home of a large population of priests and workmen employed at the tombs and temples. The most valuable and extensive series of the fragments at Turin (excluding the Papyrus of Kings) is that which belongs to journals, which when complete probably gave a record of the principal events concerning the necropolis during the later part of the Twentieth Dynasty. Would that some of them had been complete! The construction of royal tombs, the robberies from them, the commissions of enquiry, the equipment and composition of the office of management, the days of accession of the obscure Ramesside kings would all have been read in black and white (or rather brown) on the papyri, but alas! only tattered pages of some isolated portions have been preserved.

In this first instalment we are given a piece of a journal of the end of year 13 and the beginning of year 14 written on back and front of two fragments. The editors show that the reign is that of Nefekerēf, commonly known as Ramesses IX. The remains of the recto are entirely occupied by a list, in three pages, of boats and other equipment valued in silver *deben* and *kite*. On the three pages of the verso is a diary from the fifth epagomenal day of year 13, apparently with little break in the fragments, to the twenty-fourth day or more of the first month of inundation of year 14, *i.e.* about one month; yet the editors point out that there are serious difficulties as to the date on which the change from year 13 to year 14 took place. Beside the photographic plates there is a very useful diagram of the fragments and of the pages of writing. There is a diagram also of a much longer series of about thirty fragments, large and small, of the journal of year 17, of which sixteen pages are recognisable on the recto and about the same number on the verso. The entries for each day vary from one line to twenty and for months together the principal and often the only item was that the workmen were not working, the reason being apparently that their wages or food supplies were in arrears all the time. Absence of "strangers" or of "Libyans" is also often noted, but the exact significance of this tantalising entry is not yet apparent. At the same time enquiries were being conducted into robberies of tombs, which were indeed likely to have taken place in such a disorganized state of things.

About one-third of this papyrus is published in the fasciculus. Four pages give the names of eight persons imprisoned for tomb robbery and the rations allowed for them and for others; the other pages record many particulars from the middle of the first winter month to the middle of the third of year 17 during which the workmen were still starved and doing nothing and the most important business was that of the robberies, the confessions of some of the thieves being recorded.

These fragmentary journals mention people and events that appear also in other papyri in Turin and the British Museum. Very little of all this had been published previously—only parts of two pages by Pleyte and Rossi in a tracing and with little understanding of the contents. It is not until the whole has been published that we can realize its contribution to the picture of Ancient Egyptian life at an alarming crisis.

The authors' method of publication is the most complete possible: the fragments are carefully listed and described, and all the writing is turned into hieroglyphic in plates corresponding to the facsimile and is translated with brief but learned commentary.

The following corrections and suggestions have occurred to me in reading the fragments.

Journal of year 13:

Page 3, recto, l. 10. $\Delta \overline{\text{---}}$ must be the *qerer*-boat of Nauri stela, ll. 24, 25; *cf.* Brugsch, *Wb.* 1466.

Page 1, verso, l. 6. "This day the wazir arrived (back?) from the south (lit. 'going north'), whereas he had gone to bring the second priest of Amūn." $\text{A} \text{---}$ is for $\text{A} \text{---}$.

Ib., l. 11. "The inspector of the province departed saying 'We will report to the vizier' (*i.e.* 'intending to report to the vizier'), as the scribe Pbēs was waiting for them."

Page 3, verso, l. 3. "The workmen came."

Journal of year 17:

Page 1, B. recto, l. 2. Certainly --- not --- ; l. 4, --- seems to me the real equivalent of this common late group; l. 9, "hungry, short of their (*sn-my* for *sn-imy*) provisions"; ll. 10, 17, --- ; l. 18, "regarding (*m*) all provisions"; l. 25, add --- before *wrtu*.

Page 2, B. recto, l. 17. Omit "pescatore"; l. 30, --- ; l. 31, for "andar su" rather "mount," "ride."

We shall all look forward to the continuation of the "Journal" in this fine publication.

F. LL. GRIFFITH.



Eighteenth (?) Dynasty Terracotta Bust; British Museum.

Scale $\frac{1}{2}$

A PAINTED TERRACOTTA HEAD IN THE BRITISH MUSEUM

BY H. R. HALL

With Plates xvi and xvii.

The head in the British Museum (No. 21820) of which photographs are published in Plates xvi and xvii is an interesting piece, unpublished previously, so far as I am aware. It is said to have been found in the Fayyûm, but for this there is nothing but the word of the man who sold it to the Rev. Greville Chester, from whom it was acquired in 1887. From the facial traits it has usually been taken to be a portrait of a woman. Its date has generally hitherto been assumed to be Roman, but for no very cogent reason that I can see. It is odd and difficult to place, but it can hardly be of the Roman period. The treatment of the features makes this unlikely, and I cannot believe it to be Roman, and am inclined to assign it to the Eighteenth Dynasty. It looks to me like a work of the reigns of Tuthmosis IV or Amenophis III, between 1425 and 1375 B.C. The way in which the nose, mouth, and chin are modelled is to my eye distinctly reminiscent of work of the end of the fifteenth century.

If so, is it a man or a woman? One would say, certainly a woman. But an Egyptian lady of that time should have a much longer coiffure, parted in the middle. This short wig or hair with the square fringe over the forehead (not worn then by women) looks more like that of a man. The head may represent a young man. Young male portraits at this period not seldom present a rather feminine contour. But the point cannot be definitely decided, as it can in the case of the well-known bust of a young man of this period in the Birmingham Museum of Fine Arts (cast in the British Museum) which is of course without doubt male, despite the fact that it has mistakenly been attributed to the opposite sex¹. The coiffure in No. 21820 is not quite of the regulation male type, as is that of the Birmingham figure, but is very like it. But if the head is not of the Eighteenth Dynasty, and is that of a woman, the only suggestion I can make is that it belongs to the Old Kingdom (Fourth-Sixth Dynasty), like the wife of the *Shêkh el-beled* (who has "bobbed," though parted, hair), and that does not seem to me to be at all so probable as an Eighteenth Dynasty origin.

It is a curious piece. For one thing, it is not the broken off upper part of a figure. It is a bust, intended to be fitted either on a simple pedestal-block (and so be a simple bust), or possibly on to a body of a different material, wood perhaps. For the shoulder-part is hollow, to fit over the tenon of the body (?) below; and the edges of the bust are carefully rounded off and the paint covering the whole is carried round them into the cavity. But there are no arms. This is then a true bust. And so it is in all probability just a sculptor's model, and had no body.

¹ See PETRIE, *Proc. Eg.*, I (1914), 48. This is part of a seated group of a man and his wife, of a type common at that time; his wife's hand is seen on the man's back, in the usual affectionate position.

It is half life-size, measuring 14 ins. (0.355 m.) in height; the head from chin to crown 6 ins. (0.152 m.). Its material is terracotta, well baked brown-red pottery with a deep red surface reinforced by red paint; this is best preserved on the lower part. The hunched appearance of the right shoulder is due to the rubbing away of the softer material where, as can be seen in the plate, the red surface has flaked off. On the face the original surface has mostly gone, but there are remains of red paint on the forehead, of black on one eye, and of black on the fringe of hair over the forehead. Luckily the features, however, are intact, showing an individual portrait with large mouth and short upper lip. The short wig or hair was originally painted black over the red surface. At some time the head has been partially burnt so that the whole of the wig on the right side has been charred and has broken away, leaving a blackened surface. It is evident that the wig was slapped on to the clay head when the latter was getting dry; it is not altogether of one piece with the rest of the head, and was inclined to separate from it. The head had broken off from the shoulders, and is mended with modern glue, two streaks of which run down the front of the bust and should not be mistaken for darker ancient paint. Whether the burning is due to bad firing on the part of the potter or is later is difficult to say. Is it a potter's failure?

The style is summary: the fringe of hair over the forehead for instance is indicated by a rough succession of marks. The treatment of the eyes with the dipping line next the nose, and with careful outline cut out with the knife, is noticeable. The portrait is obviously well characterized. Is it of the Eighteenth Dynasty or of the Old Kingdom?

I think, on account of the facial characteristics and the treatment of the eyes, that it is of the Eighteenth Dynasty, about the time of Amenophis III, and that if so it is probably intended to represent a man. The coiffure seems to me male, with the typical square-cut fringe of the men of the Eighteenth Dynasty. Men sometimes parted their hair in the middle then too, but women always have their hair parted in the middle even when it is "bobbed," until under the later New Kingdom and the Saites we find them wearing short coiffures (probably wigs), not parted. But that coiffure is quite different from that of this head, which seems to me to be very like the ordinary Eighteenth Dynasty male hairdress *minus* the two lappet-like locks or masses of hair that usually fall from behind the ears on to the shoulders. It is a question whether these two locks did not originally exist on the head, but have flaked off. I doubt this, however, as the "bob" is square and not rounded off so as to show part of the ear, as it normally would.

The red colour of the bust is also an argument in favour of its representing a man. The face (though, of course, much coarser and rougher) is, with its short upper lip, curiously reminiscent of that of the Birmingham head, the date of which is undoubted. It is an "Eighteenth Dynasty face," in my opinion. And from the date of its acquisition, 1887, I should say that it is highly likely that it really came from El-Amarnah.

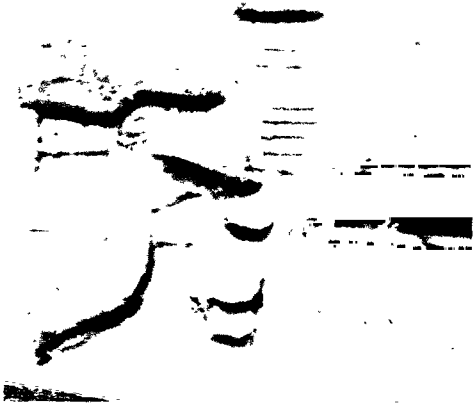


Eighteenth (?) Dynasty Terracotta Bust; British Museum.

Scale $\frac{1}{2}$



1.



2



3.



4.


- (1) The Sha-animal. From the mace-head of the Scorpion King.
- (2) Model of a young pig showing the stripes. *Scale 1*
- (3) Faience model of a sow with young. B.M. 11976. *Scale c. 1*
- (4) Glazed figure of a sow. First Dynasty. *Scale slightly over natural size.*

THE PIG AND THE CULT-ANIMAL OF SET

By P. E. NEWBERRY

Plates xviii and xix.

I. The Domestic Pig in Ancient Egypt.

The domestic pig was already known to the Egyptians of predynastic times; small models¹ of it in clay have been found in graves of that period at Abydos and elsewhere in Upper Egypt. A glazed figure of a sow² dating from the First Dynasty has been discovered at Abydos (Pl. xviii, fig. 4), and it is remarkable that it is similar in shape to the faience amuletic sows that were common in Saite times (Pl. xviii, fig. 3). The earliest mention of the domestic pig in literature occurs in the biography of Methen³, an official who, under one of the monarchs of the Third Dynasty (*circa* 2900 B.C.), held important administrative posts in Lower Egypt. He says that on the death of his father he was given the deceased man's property, which included "people and small cattle," the latter, according to the determinatives of the word used, comprising asses and pigs⁴. Swine (*šw*) are mentioned in the inventory of Thutinekht's possessions given in the Story of the Peasant⁵ (*circa* 2200 B.C.). An Egyptian sage⁶, describing the conditions of his country during the civil wars between the Thebans and the Herakleopolitans, says that so scarce had food become that men had perforce to "eat herbs, and wash them down with water; no fruit nor herbs were to be found for the birds, and even ordure (?) was taken away from the mouth of swine." Under Sesostris I (1950 B.C.) a certain Menthuwaser⁷ was placed in charge of the royal farms, and he gives as one of his titles  "Overseer of Swine,"—the only instance of such a title that has been found in Egypt. That pigs were bred in considerable numbers throughout the Nile Valley in the New Kingdom is proved by several contemporary statements. Renni⁸, Mayor of El-Kâb, says that he possessed 100 sheep, 1200 goats, and 1500 pigs. The royal scribe Amenhotep records⁹ that among the property given by King Amenophis III to the temple of Ptah at Memphis were 1000 pigs and 1000 young (?) pigs. In the reign of Seti I the pig was bred in the temple domains at Abydos¹⁰. In the Ebers, Hearst, and

¹ British Museum No. 50639; QUIBELL, *Hierakonpolis*, I, Pl. xxii, 8.

² PETRIE, *Abydos*, II, Pl. vi, No. 66, and p. 25.

³ SETHE, *Urkunden*, I, 3.

⁴ In the Satrap Stela (Alexander II) in the Cairo Museum, the word *mnma*, "cattle," is determined by three oxen, a ram, a gazelle, a pig and an ass (SETHE, *Urkunden griech.-röm. Zeit*, 19).

⁵ VOGELANG-GARDINER, *Die Klagen des Bauern*, Taf. 24, l. 138.

⁶ GARDINER, *Admonitions of an Egyptian Sage*, 45.

⁷ C. L. RANSOME, *The Stela of Menthuwaser*, 18.









⁸ SETHE, *Urkunden*, IV, 75, l. 15.

⁹ PETRIE, *Memphis*, v, Pl. lxxx, l. 24. An account papyrus in the handwriting of the late New Kingdom (MARIETTE, *Papyrus égyptiens du Musée de Boulaq*, II, Pl. v) also refers to swine.

¹⁰ Professor Griffith in his paper on the Abydos Decree of Seti I at Nauri in *Journal*, XIII, 201 ff., translates the word *šw* (lines 35, 56, 58, 59) by "dogs," but this is obviously an error; the domesticated animals named are kine, asses, goats and pigs. For the reading *šw* see p. 202, footnote 9, and *cf.* p. 204, footnote 1.

other medical papyri, the blood, gall, liver, etc., of pigs were often directed to be used in medical prescriptions¹. In Renni's tomb² at El-Kâb occurs the earliest representation of domesticated swine in an agricultural scene. In the tomb of Paheri³, also at El-Kâb, a swineherd is figured driving a drove of pigs. In three tombs of the Eighteenth Dynasty at Thebes⁴ swine are again depicted in agricultural scenes (Pl. xix, figs. 1 and 2), and in two of these the animals are shown being driven over fields of newly sown corn to tread it in,—a custom that still prevailed in Egypt a thousand years later when Herodotus⁵ visited the Nile Valley. In Graeco-Roman times swine were bred in considerable numbers throughout the country⁶. A tax was imposed upon them, and there are many references in the papyri of the period to swineherds and pig-merchants⁷. At the present day pig-breeding in Egypt is mostly confined to Coptic villages⁸, but in some of the larger towns of Upper Egypt considerable numbers are reared by the Greek merchants for export to Cairo and Alexandria.

II. Names for the Pig in Ancient Egyptian.

The commonest name for the domestic animal was  *šj*⁹, fem.  *šj-t*, pl.  *šrw*; Coptic : fem. , pl. . It is first found in texts of the Herakleopolitan Period;  (abbr. ) *Zeitschr. f. äg. Spr.*, LVIII, 17*, 20*.

¹ In the *Hearst Medical Papyrus*, 16, 4-6, there is a prescription "against the bite of a pig."

² TYLOR, *Wall-Drawings of El Kab*, IV, Pl. iv.

³ TYLOR-GRIFFITH, *The Tomb of Paheri*, Pl. iii.

⁴ SPIEGELBERG-NEWBERRY, *Report on Some Excavations in the Theban Necropolis*, Pl. xiii, p. 14. The illustration given in Pl. xix, fig. 1, is reproduced from a tracing of the scene of swine in the tomb of Inena (No. 81) at Thebes. This scene is now much mutilated: a pencil drawing of it, made by Sir Gardner Wilkinson, probably in the late twenties of last century, is preserved among his papers (Vol. II, f. 19), and a woodcut made from this drawing is printed in his *Manners and Customs of the Ancient Egyptians*, ed. Birch, 1878, II, 100; it is, however, very inaccurate and the striping of the young animals has been omitted.

⁵ Herodotus, II, 14; Pliny, *H.N.*, XVIII, 47; Aelian (*Nat. Anim.*, X, 16) quotes Eudoxus as saying that it was customary with the Egyptians to drive swine over newly sown grain that the seed might be trodden into the ground and so protected from the ravages of birds.

⁶ Polyænus (*Strat.*, IV, 19) refers to herds of swine in the Memphite province in Ptolemaic times; Heliódorus (V, 28; IX, 23) speaks of them in the districts about the Herakleopolitan (Canopic) mouth of the Nile, and at Syene (Aswân). An inscription on a wall of the temple at Kalabshah records an order of Aurelius Besarion of Ombos and Elephantine, that proprietors should "keep their pigs at a distance from the temple" (Greek text, *L., D.*, VI, 95, No. 379). Among the papyri from the archives of Zenon there are many references to the sacrifice of pigs on the day of the festival of Arsinoëia, the festival instituted in honour of the deified Arsinoë and held in the Arsinoite nome; see EDGAR in *Ann. Serv.*, XVIII, 239.

⁷ For the tax on swine see WILCKEN, *Griechische Ostraka aus Aegypten und Nubien*, Index under *ῥική*; GRENFELL-HUNT, *Oxyrhynchus Papyri*, Nos. 288, 289, etc.; HUNT, *Rylands Greek Papyri*, No. 193. The sums paid by individuals under this heading in tax receipts show considerable variation; "this variation," writes Dr. Hunt, "cannot be explained on chronological or geographical grounds and combined with the evidence of WILCKEN, *Ostr.*, II, 10, 31, gives ground for supposing that the *ῥική* was not a licence-charge, but was assessed on a basis of number or value." For swineherds, see GRENFELL-HUNT, *Tebtunis Papyri*, 47; and for a pig-merchant, GRENFELL-HUNT, *Fayûm Towns and their Papyri*, 259. Thefts of pigs were frequent (HUNT, *Rylands Greek Papyri*, No. 134). A tawny-coloured pig in the Fayûm or in Middle Egypt in A.D. 36 is stated to have been valued at 8 drachmae (HUNT, *op. cit.*, No. 140), and a tawny-coloured brood-sow "about to litter" was valued at 12 drachmae (HUNT, *op. cit.*, No. 134).

⁸ On pig-keeping among the Copts, see *Ann. Serv.*, XI, 162.

⁹ In Greek the pig was named *σῦ-ς*; Latin, *su-s*. According to CURTIUS, *Gr. Etym.*, Rt. 579, the root is to be found in Sanskrit *śū*, *generare*.

The pl. is found in *Peasant*, B. 2, 138. A remarkable variant ¹ occurs in the tomb of Bebi at El-Kâb dating from the period immediately preceding the Eighteenth Dynasty. In the New Kingdom the following writings occur: Pap. Ebers, 82, 14; with determinative, *op. cit.*, 54, 3. In the Eighteenth Dynasty copies of the *Book of the Dead* (Ch. CXII) we have and , *Zeitschr. f. äg. Spr.*, LVIII, 17*, 20*. In the Ptolemaic Period the word is sometimes written (NAVILLE, *Mythe d'Horus*, Pls. xi, 5, and ix). In another late text the writing is found (DÜMICHEN, *Tempelinschr.*, II, 41, l. 8).

Another name that was sometimes employed for the domestic animal was *rrî*; fem. *rr-t*²; Copt. *ppp*; but this name seems originally to have denoted the wild boar; it was also occasionally used for the hippopotamus. In a list of offerings in the temple of Ramesses III at Medinat Habu the pig is named but this word has not been found elsewhere.

III. The Pig as a Sacred Animal in Egypt.

There is a considerable amount of evidence to show that the pig was regarded as a sacred animal among the ancient Egyptians. The statement of Herodotus (II, 47) that they held swine to be unclean animals does not militate against this view, for Robertson Smith³ has shown that the notions of holiness and uncleanness often touch. Frazer⁴ remarks that "the view that in Egypt the pig was sacred is borne out by the facts which, to moderns, might seem to prove the contrary." He refers to the statement of Herodotus that a man had to wash himself and his clothes after touching a pig, and says that this fact favours the sanctity of the animal, for "it is a common belief that the effect of contact with a sacred object must be removed, by washing or otherwise, before a man is free to mingle with his fellows." Herodotus (II, 47) further tells us that in Egypt swine were sacrificed to the moon-god and to Dionysus (*i.e.*, Osiris) at the season of the full moon; "they then eat the flesh." Plutarch (*De Is.*, 8) states that "those who sacrifice a sow to Typho (*i.e.*, Set) once a year at full moon, afterwards eat the flesh." Aelian (*De Nat. Anim.*, x, 16) remarks that the Egyptians have "a firm conviction that swine are particularly abhorrent to the sun and moon," that they sacrifice these animals once a year, *i.e.*, when they hold the annual lunar festival, but on no other occasion do they offer them either to the moon or to any other gods. Aristides (*Ap.*, 12), Clemens (*Coh.*, 2) and Cyril (*De Ador.*, I, Migne, tom. 68, p. 189) all refer to swine as sacred among the Egyptians, and Clemens notes that they were particularly sacred with the Thebans and Saites⁵. We also have important evidence from native Egyptian sources as to the sacredness of the animal. In the *Book of the Dead*, Ch. CXII⁶,

¹ In GRAPOW, *Religiose Urkunden*, 151-2, there is a similar variant () in the writing of the common plant-name . The -plant was connected with Set; *š3-s pw h̄bsyt tw hrt sd St*; "its *š3*-plant, it is the hair under the tail of Set" (*op. cit.*, 151). It is interesting to note that in the same Middle Kingdom text the *š3*-plant is a variant of the -plant; "its [a ship's] reeds, they are the spittle in the mouth of Bebi" ().

² *Journal*, III, 103, l. 6: on a Thirteenth Dynasty Stela in Turin occurs the personal name (*Rev. trav.*, III, 123).

³ *The Religion of the Semites*, 446.

⁴ *The Golden Bough; Spirits of the Corn and of the Wild*, II, 25.

⁵ Cf. *Pyramid Texts*, 1521, where we read of Osiris and Isis, Set and Neith; the latter was the goddess of Sais.

⁶ SETHE, *Die Sprüche für das Kennen der Seelen der heiligen Orte*, Leipzig, 1925.

Set is said to transform himself into a black pig. In the same chapter we read of the sacrifice of swine, and of swine being an abomination of Horus but the traditional animal of Set. In the annals of Sahurêr on the Palermo Stone, Set appears as a hog with bristled back¹. It is as a pig, *not* a hippopotamus, as is usually said², that Set is figured in the scenes of the Horus myth on the walls of the Temple of Edfû: this will be obvious if we compare the figures of the Set-animal as he appears at Edfû with a drawing of a hippopotamus (see Figs. 1, 2 and 3). In the inscription on the Metternich Stela³ it is a white sow that is said to have given birth to the god Min. In a late text⁴ the pig is actually named as the Typhonian animal.

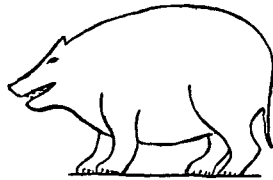


Fig. 1. The pig, figured in the temple of Edfû (NAVILLE, *Mythe d'Horus*, Pl. xi).

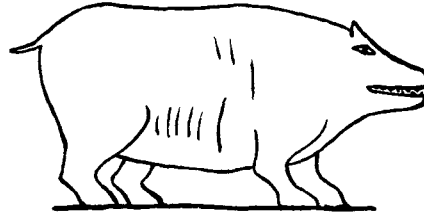


Fig. 2. The pig, figured in the temple of Edfû (NAVILLE, *Mythe d'Horus*, Pl. ix).

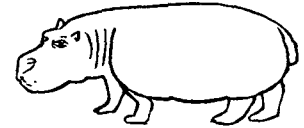



Fig. 3. The hippopotamus.

IV. On the Origin of the Domestic Pig.

The domestic pig, we have seen, was known to the Egyptians as early as 3500 B.C.; we may therefore well ask the question, from what source or sources was it derived? The question is important, for the answer to it may be expected to throw some light on the early migrations of man. In studying this subject we have to bear in mind that the domestic pig is not a pastoral animal, that it does not belong to a people in the pastoral stage of civilization. The ox, sheep, and goat can be driven from pasture land to pasture land but the pig has to be housed, at all events during part of the year⁵, and consequently it must have been first domesticated by people living in a partially-settled agricultural condition. Several Greek writers⁶ have, in various ways, remarked on the peculiarity of the pig as contrasted with other domesticated animals, in that it is only useful when dead, giving neither milk as do the cow and goat, nor wool as does the sheep. The pig lives chiefly upon succulent roots and tubers which it digs up from the ground with its mobile snout, and on fruits like the acorn and chestnut, and on grain.

Dr. Jevons⁷ gives the following important note on the early history of swine. He points out that it was forbidden food to the Hebrews and the facts regarding it seem to be as follows: "The swine as a domesticated animal was not known to the undispersed

¹ SCHÄFER, *Ein Bruchstück altägyptischer Annalen*, 36, last vertical line.

² I myself fell into this error in my paper on "The Set Rebellion" printed in *Ancient Egypt*, 1922, 42. Not only is the animal figured as a pig, but it also bears the name  in the important historical scenes given in NAVILLE, *Mythe d'Horus*, Pls. ix, x, xi.

³ I, 86. 

⁴ PIEHL, *Inscr. hiérog.* (Nouvelle Série), Pl. civ, l. 9.

⁵ See footnote 7 below.

⁶ Aelian, Aesop, and Lactantius (cited by BOCHART, *Hierozoicon*, II, 698); this is noted by Rolleston in his *Scientific Papers and Addresses*, ed. Tylor, 1884, II, 528.

⁷ F. B. JEVONS, *Introduction to the History of Religion*, 1908, 118, n. 3.

Semites or to the Sumerian population of Babylon (SCHRADER, *Prehistoric Antiquities*, 261); on the other hand, its flesh was forbidden food to all Semites (ROBERTSON SMITH, *Religion of the Semites*, 218). The inference, therefore, is that (1) it was after their dispersion that the Semites became acquainted with the swine as a domestic animal, (2) it was forbidden food from the time of its first introduction and spread amongst them. In the next place, (1) the pig can only be housed and reared amongst a settled, i.e., *agricultural*, population, (2) the pig is associated especially with the worship of agricultural deities, e.g., Demeter, Adonis, and Aphrodite. The inference again is that, as agriculture and the religious rites associated with it spread together, it was in connection with some form of agricultural worship that the domestication of the pig found its way amongst the various branches of the Semitic race. Finally, the swine (1) was esteemed sacrosanct by some Semites, (2) is condemned in Isaiah (lxv, 4; lxvi, 3, 16; cf. ROBERTSON SMITH, *op. cit.*, 291) as a heathen abomination. The inference, then, is that the worship with which the swine was associated did not find equal acceptance amongst all Semites. Where it did find acceptance, the flesh was forbidden because it was sacred; where it did not, it was prohibited because of its association with false gods."

The effects of domestication have been very marked on swine. As regards bodily form we have but to contrast the long-legged, long-headed, thin-bodied, "greyhound pig" of Ireland with some of the best modern breeds, to see how enormous is the difference in this respect. In studying all domesticated breeds of animals it must be borne in mind that domesticated breeds often die out; Darwin in his *Variation of Plants and Animals under Domestication*, I, 96, has noted, for instance, that the Berkshire breed of pig of 1780 was different from that of 1810, and that since that period two distinct forms have borne the same name. Besides the great difference in bodily form there are also marked differences in the shape of the ears; in some breeds they are large and pendent, while in others they are small and erect. In practically all breeds the tusks of the boars are small and very different from those of all wild species at present existing; in this respect Lydekker¹ remarks that we have a "reversion to extinct species of swine, in the earlier forms of which the tusks are but slightly developed."

Zoologists are not agreed as to the origin of the various breeds of domesticated swine and many different views have been expressed by different writers. Some consider that certain of the earlier races found in Europe had an eastern origin. Others hold to the view that all breeds are descended directly from the European Wild Boar (*Sus scrofa* v. *ferus*). Others again believe that the original domesticated races of different parts of the world have been derived from the wild species inhabiting the same districts. A large number of the species of the genus *Sus* have been described, but Lydekker in his *Catalogue of the Ungulate Mammals in the British Museum*, IV, 306 ff., reduces them to seven:

(1) *Sus scrofa*, the Wild Boar of Europe, with nine local varieties, the range of which formerly included the whole of the afforested districts of temperate Europe from Ireland and Scandinavia eastwards throughout temperate Asia north of the Himalayas to Szechuan, as well as Africa north of the equator.

(2) *S. cristatus*, the Wild Boar of India, with two local varieties ranging throughout India, Ceylon, Burma, Siam, and part of the Malay Peninsula.

(3) *S. leucomystax*, indigenous in Japan and Formosa.

¹ R. LYDEKKER, *Royal Natural History*, London, 1894, 431.

(4) *S. vittatus*, with twelve varieties, natives of Sumatra, Java, the Malay Peninsula, Great Nicobar Island, and the Andaman Islands.

(5) *S. celebensis*, with seven local varieties, ranging throughout the Celebes, Philippine Islands, Amboina, and Ceram.

(6) *S. verrucosus*, of Java.

(7) *S. barbatus*, with five varieties, of Borneo, Sumatra, and the Philippines.

No species of the genus has been found wild in North, Central, or South America, and none occurs in Africa south of the equator, in Australia, Tasmania, New Zealand, or in the South Sea Islands. The domestic pig, however, has now spread over nearly all the world except the polar regions where the climate is too cold for it to live.

In 1860 the German naturalist Hermann von Nathusius published his important work *Die Racen des Schweines*¹ in which he showed that all the various breeds of domesticated pig can be divided into two groups, one resembling in all respects the Wild Boar of Europe, the other differing in several important and constant osteological characters. This latter group he believed to be descended from an eastern type now only known in a domesticated condition. The name that has been given to this group is *Sus indicus* in spite of the fact that there is no evidence that the wild aboriginal ever inhabited India. Charles Darwin, in his *Variation of Plants and Animals under Domestication*, 84, notes that after reading the remarks of Nathusius "it seems to be playing with words to doubt whether *S. indicus* ought to be ranked as a species, for the differences are more strongly marked than any that can be pointed out between, for instance, the fox and the wolf, or the ass and the horse." "*Sus indicus*," Darwin goes on to say, "is not known in the wild state, but its domesticated forms.....come near to *S. vittatus* and some allied species..... The Roman or Neapolitan breed, the Andalusian, the Hungarian, the 'krause' swine of Nathusius inhabiting south-eastern Europe and Turkey, and the small Bundtner swine of Rutimeyer, all agree in their more important skull-characters with *S. indicus*. Pigs of this form have existed during a long period on the shores of the Mediterranean, for a figure closely resembling the existing Neapolitan pig was found in the buried city of Herculaneum²." There has been much speculation among zoologists as to what the unknown wild parent of the *Sus indicus* group of pigs was like. In 1875 Professor Rolleston contributed a paper to the Linnaean Society "On the Domestic Pig of Prehistoric Times in Britain," and in this paper he gathered together most of the material that was then available on the history of the domestic pig in general³. Regarding the parentage of the *Sus indicus* group, Rolleston considered that *S. vittatus*, *S. leucomystax*, and *S. tavianus* all have very strong claims, "in days sufficiently far off to have allowed the tendency to striping of the young to become eliminated." With regard to the swine of prehistoric Britain he believed that it would be unsafe to postulate any other parent stock than *S. scrofa* v. *ferus*; but he adds "such is the diffusibility and transportability of *Sus* that it is not impossible, nor inconceivable, that the domestic European pig, even in the Stone Age, may have had an Asiatic or African origin." Rolleston, however, omitted one important line of investigation; he did not take into consideration any of the feral or semi-feral pigs of those parts of the world where there are no native species for the domesticated animal that has run wild to breed with. He

¹ See also his *Schweineschadel*, Berlin, 1864.

² *Antichità di Ercolano*, Napoli, 1767, tome II, 71; SALOMON REINACH, *Répertoire de la statuaire grecque et romaine*, tome II, 747.

³ Linnaean Society's *Transactions*, Second Series, Zoology, I, 1876; reprinted with many additions in his *Scientific Papers and Addresses*, 1884, 518-64.

did not take into consideration the remarkable fact that even in Europe domesticated swine when left to run wild for many generations have never been known to revert to the Wild Boar (*S. scrofa*) type. In the woods of Norway and Sweden the feral pigs, though dangerous, can always be distinguished from the Wild Boars which range the same woods¹. In the north Highlands of Scotland the pigs are left almost in a state of nature and are allowed to search undisturbed for their food, yet these creatures, although they acquire a wild and grisly aspect, never assume the characters of the Wild Boar; they remain gregarious, the male continuing with the herd and never betaking himself to a solitary lair. Many of the swine of South America, carried thither by the Spaniards, have escaped into the woods, but they have not become Wild Boars and remain in herds. The pigs which have run wild in Brazil have not reverted to the Wild Boar type². The feral pigs of the New Zealand swamps are not at all like the Wild Boars of Europe. Feral swine throughout the world become long and lean in the body with remarkably long head, the ears are large and pricked, and the tails that they carry are not tufted like those of the Wild Boar of Europe but have lateral hairs at the end which give them the appearance of plumed arrows. No wild animal answering to this description is now known, but such a creature is figured on the ancient monuments of Egypt, and this animal actually bore the name $\overline{\text{pwt}} \text{ } \overline{\text{X}} \text{ } \overline{\text{S}}$ ³,—the name that was given to the domestic pig. This animal is generally known as the cult-animal of the god Set; it is usually supposed to be a fabulous creature⁴, but in one ancient text it is stated to be a denizen of the marshes⁵, and it is figured with other wild animals in a desert⁶ hunting scene. I believe that in this Egyptian animal we have the original species of *Sus* from which the domestic pig has been mainly derived,—in other words this Egyptian animal is the *Sus indicus* of Nathusius.

V. The Cult-Animal of Set.

At a first glance this Egyptian cult-animal, as it is figured on the monuments from the Pyramid Age onwards, looks like a greyhound (see Fig. 4), but the greyhound-like appearance is characteristic of semi-feral and feral swine throughout the world.

¹ Low, *Domesticated Animals of the British Islands*, 409.

² J. R. RENGGER, *Naturgeschichte der Säugethiere von Paraguay*, Basel, 1830, 331.

³ QUIBELL, *Excavations at Saqqara*, 1906-07, 50; NEWBERRY, *Beni Hasan*, II, Pls. iv and xiii. A pair of these animals are sometimes figured on Egyptian monuments with the *sib*-foxes towing the boat of Horakhuti (PLEYTE, *Set dans la barque du soleil*, tav. 1; cf. LANZONE, *Diz. mit.*, Pl. cccxxxii); also on a Ptolemaic sarcophagus published in the *Ann. Serv.*, XVII, 20, where they are called $\overline{\text{pwt}} \text{ } \overline{\text{X}} \text{ } \overline{\text{S}}$. The same animals are mentioned together with the *sib*-animals in the *Pap. Mag. Harris*, v, 4, where they are called $\overline{\text{pwt}} \text{ } \overline{\text{X}} \text{ } \overline{\text{S}}$, *is*.

⁴ On the former identifications of this creature see below under VII. p. 223.

⁵ QUIBELL, *op. cit.*, 50.

⁶ NEWBERRY, *B.H.*, II, Pls. iv and xiii. It may appear strange to find a swamp-loving animal figured in a desert wady but there are several records of wild pigs going out into desert country, e.g., TRISTRAM, *Natural History of the Bible*, 54 and 145; C. F. TYRWHITT DRAKE in *Nature*, 1871, May 18, p. 52, notes that he was much surprised to find traces of recent uprooting by wild boars in the Wādī Rakhmah in the Desert of Tih. "This place," he says, "is far away from water except what may be collected in hollow rocks, and can boast of no cover." TRISTRAM, *Fauna and Flora of Palestine*, 3, remarks that the wild boar "extends into the bare wilderness, even where there is no cover, nor other food than the roots of desert bulbs." In the desert between Hamah and Palmyra, Giovanni Finati saw on June 9th, 1816, "a wild sow with her four younglings; they were the only living objects that were seen, for it is a very dreary desert" (W. J. BANKES, *Narrative of the Life and Adventures of G. Finati*, London, 1830, II, 177).

Livingstone¹, writing of the pigs of the Portuguese settlers at Senna on the Zambesi, records that the village had a "number of foul pools, filled with green fetid mud, in which horrid long-snouted greyhound-shaped pigs" wallowed with delight. When Captain Cook visited the Fiji Islands towards the middle of the eighteenth century he found that the domestic pig was unknown to the islanders, and he left a pair on Vavau Island. The descendants of this pair have since led a semi-feral existence and have become "long-legged, lean, sharp-faced, and like in appearance and agility to greyhounds²." In Manchuria the semi-feral pigs have assumed the greyhound-like shape³. In the West of Ireland there was till a few years ago a famous breed that was known as the Old Irish Greyhound Pig⁴. This animal is described as having been a tall, active-looking creature with very long head, large ears, long thin body, and long legs. Pigs similar to the Irish breed still roam the heaths of Jutland⁵. The descendants of the domestic pig that was introduced into Brazil by the early Portuguese settlers have reverted to this greyhound-like type⁶. Greyhound-shaped semi-feral swine have also been observed in the Pyrenees⁷, in Italy, and in Greece⁸.

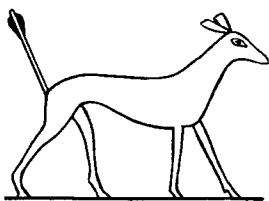


Fig. 4. The cult-animal of Set.



Fig. 5. The cult-animal of Set, from a M. K. monument at Lisht. (*A.Z.*, XLVI. 90.)



Fig. 6. The *sha*-animal in the tomb of Sekerkhabau. Cairo Museum. (MURRAY, *Saggaras Mastabas*, I, Pl. XXXVIII, 24.)

It is not only in its greyhound-like appearance that the Set-animal resembles feral or semi-feral swine. There are other points of similarity that are very striking. A remarkable feature of the Egyptian cult-animal is its tail, which is always shown erect and rigid, even when the creature is seated on its haunches (Fig. 5) or is lying down (Fig. 6). All specimens of the family *Suidiæ* have this habit of erecting the tail when they are in any way irritated; even our own domestic pig will often uncurl its tail and erect it if angered. Lydekker⁹ says of the members of the pig family that if excited they carry their tails straight upright. On the Egyptian monuments the tail of the Set-animal is usually depicted like a feathered arrow (see Figs. 4 and 5). Many of the feral pigs of Jamaica, derived it is said from a Spanish stock, have tails like a plumed arrow¹⁰. P. H. Gosse¹¹ records that a Mr. Johnstone of Portland, Jamaica, told him that

¹ D. and C. LIVINGSTONE, *Narrative of an Expedition to the Zambesi, 1858-1864*, London, 1865, 152.

² They were so described by the late Rev. A. L. Cortie, the Astronomer of Stonyhurst College, in a letter that he kindly wrote me in answer to an enquiry about the descendants of Capt. Cook's pigs.

³ From information given me by Mr. J. R. Hughes of Bradford, who resided for many years in Manchuria.

⁴ On this breed see the paper by R. F. Scharff in the *Irish Naturalist*, 1917, 175 ff.

⁵ H. THIEL, *Die Entwicklung der Schweinezeit in Dinemark in Landwirtschaftliche Jahrbucher*, xxxv (*Erganzungs.* II), Berlin, 1906, 33.

⁶ From information kindly given me by Mr. R. F. Scharff in a letter dated Wicklow, Oct. 1924.

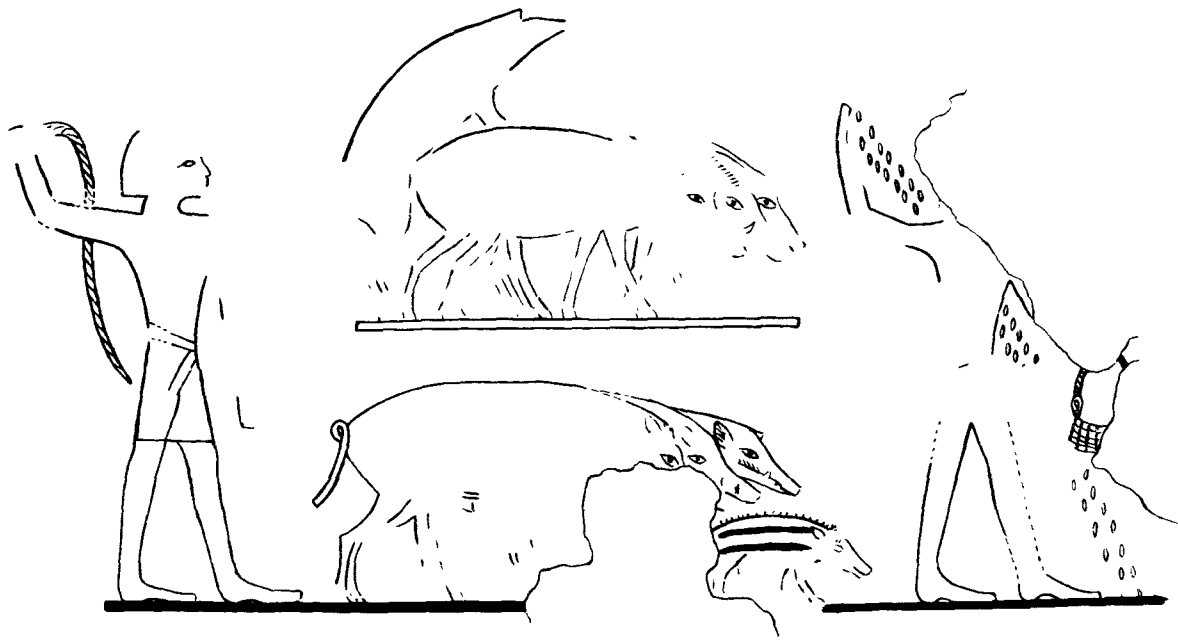
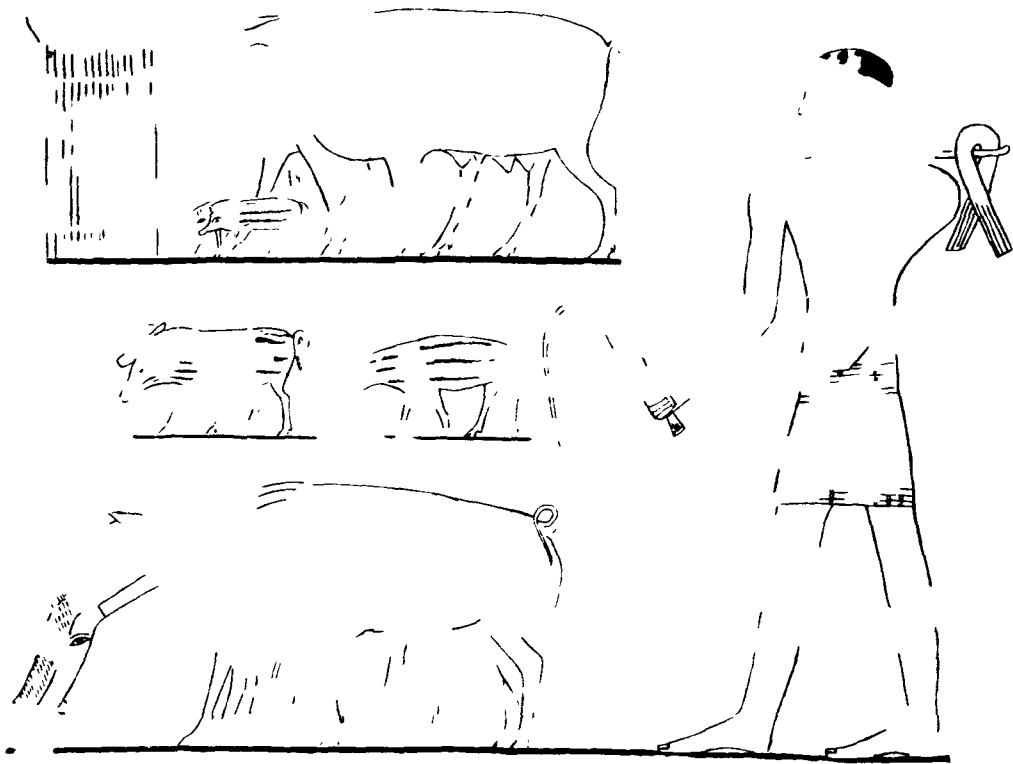
⁷ My authority for this statement is Professor Percival of Reading University.

⁸ I have myself noticed these pigs in Italy and in Greece.

⁹ *Royal Natural History*, II, 441; note also D. Low, *The Breeds of Domestic Animals of the British Islands*, London, 1842, II, 398.

¹⁰ C. DARWIN, *Plants and Animals under Domestication* (ed. 1905), I, 95.

¹¹ P. H. GOSSE, *A Naturalist's Sojourn in Jamaica*, London, 1851, 386; the italics are Gosse's.



Representations of pigs

1. Tomb of Inena (No. 81) at Thebes.
2. Tomb of Nebamon (No. 24) at Thebes.

he had seen many of these swine with a *feathered* tail. The tail of the Wild Boar of India (*S. cristatus*) is described by Captain Thomas Williamson¹ as being armed near the tip with stiff lateral bristles giving it the resemblance of the wings of an arrow. The large erect ears are also very distinctive of the Egyptian cult-animal. Many breeds of swine have huge ears which, though generally pendent, can be raised immediately the animal is alarmed. I have raised many hundreds of pigs of various breeds on my farm in Kent and have been much surprised to see the power that they possess of erecting their ears when startled. The feral swine of New Zealand and of Jamaica are described as having large prick-ears.

Furthermore the Egyptian cult-animal is figured with longitudinal stripes of dark and light colour along the body² (see Fig. 5). This longitudinal striping is characteristic³ of the young of all the wild representatives of the pig family, though it generally disappears under domestication. Mr. Winlock recently sent me a photograph of a small model pig with striped body that he found in the tomb of an early Eighteenth Dynasty vizier⁴ at Thebes; this he has kindly allowed me to reproduce here (Pl. xviii, fig. 2). In the tomb of Inena⁵ at Thebes (No. 81) not only are the very young pigs represented with longitudinal striping but we see it also in the animals of a more mature age (see Pl. xix, fig. 1); it appears also on young pigs figured in the tomb of Nebamon (Thebes No. 24, date Early Eighteenth Dynasty, Pl. xix, fig. 2). The long-snouted greyhound-like pigs which Livingstone⁶ saw in the Portuguese settlements on the Zambesi sometimes had young that were striped; he speaks of a litter at Senna which was "beautifully marked with yellowish brown and white stripes alternately, and the bands, about an inch broad, were disposed, not as in the zebra, but horizontally along the body." The feral pigs of Jamaica⁷ and the semi-feral pigs of New Granada⁷ are said to have resumed this aboriginal character and produce longitudinally striped young. Longitudinal striping has also been observed with the young of Turkish⁸, Westphalian⁹, and Indian¹⁰ domestic pigs. Very rarely does it appear with our own domestic breeds in this country but it has occasionally been noticed¹¹.

¹ *Oriental Field Sports*, London, 1807, 22. For a figure of a pig with a feathered tail see W. H. FLOWER and R. LYDEKKER, *Introduction to the Study of Mammals*, London, 1891, 286. A genus very closely allied to *Sus* is the *Potamochoerus* (River Hogs). There are only two species belonging to this genus: (1) the West African Red River Hog (*P. porcus*), and (2) the Nyasa Bush Pig (*P. chaeropotamus nyasae*). The first is remarkable for its vivid colouring and "feathered" tail. The young of both species present the striped character of the true *Sus*.

² In the tomb of King Setnakht in the Bibân el-Mulûk at Thebes the Set-animal is coloured green with black stripes (see L., *D., Text*, III, 212); I have carefully examined all the examples in this tomb and find that the striping was not *along* the body, but merely marked the reticulation of the ribs of very lean animals.

³ P. L. SCLATER, *Proceedings of the Zoological Society*, 1861, 390; W. H. FLOWER and R. LYDEKKER, *op. cit.*, 285.

⁴ The vizier's name was Iuy; he is mentioned on a stela in Vienna (No. 117), cf. *Rec. trav.*, IX, 62. His scarab-seal is in the Metropolitan Museum of Art, New York (NEWBERRY, *Scarabs*, Pl. xi, 2, p. 125).

⁵ See note 4 on p. 212.

⁶ LIVINGSTONE, *op. cit.*, 152.

⁷ C. DARWIN, *op. cit.*, 94; GOSSE, *op. cit.*, 386; HAMILTON SMITH, *Naturalist's Library*, IX, 83.

⁸ ROLLESTON, *op. cit.*, 542.

⁹ H. D. RICHARDSON, *Domestic Pigs*, London, 41.

¹⁰ ROLLESTON, *op. cit.*, 553.

¹¹ Commander W. Ward Hunt, the owner of the Islip Herd of Pedigree Middle Whites, tells me that many newly born Middle Whites have horizontal stripes along the sides and back.

VI. The God Sha.

Upon the sacred perch the *sha*-animal forms the standard of the XIth or Hypselite nome of Upper Egypt (Pl. xviii, fig. 1). As a hieroglyph the creature standing (Fig. 4), seated on its haunches (Fig. 5), or lying down (Fig. 6) is an ideograph of the god Set. On sealings of wine-jars¹ of the Archaic Period (Figs. 7-11) there is sometimes represented a male deity with human body and the head of the *sha*-animal; he wears the White Crown and holds in his hand the *was*-sceptre. His name is written $\overline{\text{𓆎}} \text{š}$ or $\overline{\text{𓆎}} \text{š}^2$ (Figs. 7-11). He was the tutelary deity of Perabsen and appears with prominence under that king's successor Khasekhemui: he is found again with Neterkhet (Zoser) and possibly also with Hetepsekhemui³. All these representations of the god are found upon the seals of wine-jars; nearly three thousand years later the god *Sha* was still the good genius of the vineyard⁴, and later still, in the time of Diodorus (iv, 1), "Typhon" (*i.e.*, Set) "was not only worshipped in the temples in the cities, but in the fields and villages where he is reputed guardian and keeper of the vineyards and orchards."

In the Old Kingdom this deity appears in the mortuary temple of Sahurê⁵ (see Fig. 12) but he is there figured with human head and is described as $\overline{\text{𓆎}} \text{š}$ "Lord of Tehenu-land," showing that he was connected with the west of Egypt, that he was, indeed, the god of the Libyans. In the inscription by his side he says that he brings to King Sahurê "all good things that are in foreign (Libyan) lands." He is accompanied by the Goddess of the West, who gives the king the $\overline{\text{𓆎}} \text{š}$ "princes of Tehenu-land (and all other) lands (of the West)."

In a New Kingdom tomb at Dêr Rifah⁶, where lies the cemetery of the metropolis of the Hypselite nome, there is a prayer to a god named $\overline{\text{𓆎}} \text{š}$, who is certainly identical with the earlier $\overline{\text{𓆎}} \text{š}$. The capital of the Hypselite nome was $\overline{\text{𓆎}} \text{š}$ Shashotep, $\overline{\text{𓆎}} \text{š}$, the modern Shuteb; Greek, Hypselis, *chy-p-š*; this name can only

¹ The sealings upon which the name and figure of this god appear have been, for the most part, inaccurately published. I have examined specimens of all the sealings, except the one of Hetepsekhemui figured in *Ann. Serv.*, III, 187, and find that the god in every case wears the White Crown and has the curved head of the *sha*-animal (see Figs. 7-11). In two examples (J. DE MORGAN, *Recherches*, 243, Fig. 816; GARSTANG-SETHE, *Mahasna and Bêt Khullâf*, Pl. ix, p. 22) the name of the deity has been misread $\overline{\text{𓆎}} \text{š}$ Horakhti, instead of $\overline{\text{𓆎}} \text{š}$. The form $\overline{\text{𓆎}} \text{š}$ appears on sealings of Perabsen (PETRIE, *R.T.*, II, Pl. xxii, 178=Cairo Museum, Nos. 11238-9, 11240-3 and others) and Khasekhemui (*R.T.*, II, Pl. xxiii, 199; AMÉLINEAU, *N.F.*, II, 301, 3; J. DE MORGAN, *Recherches*, 244, Fig. 819=Cairo Museum, Nos. 11149-50, 11173-4, etc.). $\overline{\text{𓆎}} \text{š}$ is found on sealings of Perabsen (*R.T.*, II, Pl. xxii, 179; AMÉLINEAU, *N.F.*, III, Pl. xx, 1-4=Cairo Museum, Nos. 11238-9, 11240-3 and others), of Khasekhemui (*R.T.*, II, Pl. xxiii, 200; AMÉLINEAU, *N.F.*, II, 301, 1; J. DE MORGAN, *Recherches*, 243, Fig. 816=Cairo Museum, Nos. 11126, 11132, 11174, etc.), of Neterkhet (GARSTANG-SETHE, *op. cit.*, Pl. ix, 4).

² On metathesis, see LACAU in *Rec. trav.*, xxv, 139. SHORTER in *Journal*, xi, 78, has an interesting note on a late representation of the god 'Ash=Sha.

³ On one of his seals appear the name and figure of a deity; I should read $\overline{\text{𓆎}} \text{š}$ with the figure of the god standing (*Ann. Serv.*, III, 187; *Bull. de l'Institut égyptien*, 4^e série, 107-16, No. 20; MASPERO, *Études de mythologie*, VII, 257; R. WEILL, *Annales du Musée Guimet*, xxv (1908), 155, 2 B).

⁴ G. LEFEBVRE, *Recueil Champollion*, Paris, 1922, 81.

⁵ BORCHARDT, *Das Grabdenkmal des K. Sahurê*, II, Pl. 1, p. 74.

⁶ GRIFFITH, *Sit and Der Rifeh*, Pl. 18, line 68.

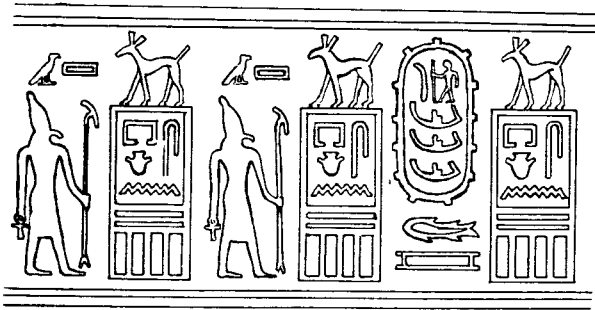


Fig. 7. Sealing of Perabsen (Cairo Museum, Nos. 11238-11243, etc.).

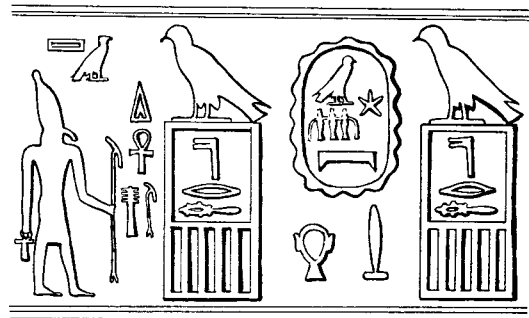


Fig. 8. Sealing of Neterkhet Zoser.

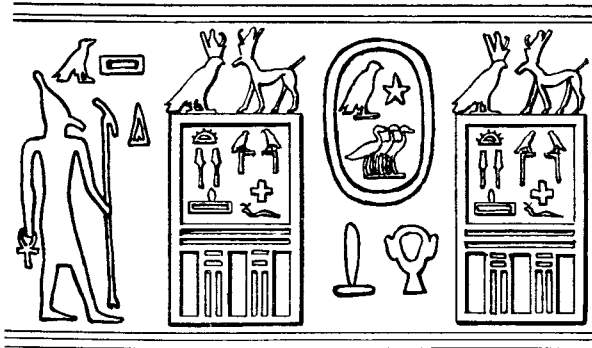


Fig. 9. Sealing of Khasekhemui (Cairo Museum, Nos. 11149-50, 11173-4, etc.).

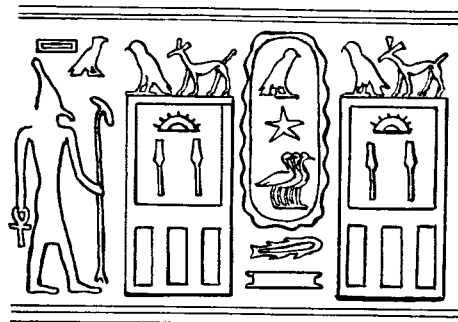


Fig. 10. Sealing of Khasekhemui (Cairo Museum, Nos. 11126, 11132, 11174, etc.).

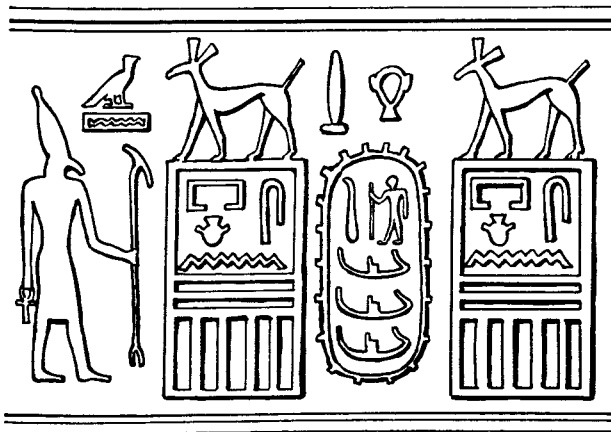


Fig. 11. Sealing of Perabsen.

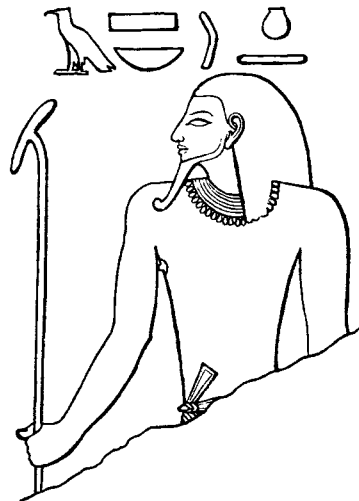



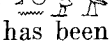






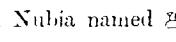


Fig. 12. The god Ash, from the mortuary temple of Sahurêf.

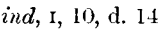
mean "(the city) pacifying (the god) Sha¹," and suggests that Sha was the original deity of the locality, although from the Old Kingdom onwards to Roman times Khnum² was the chief deity of the place.

Sha, Shau, the god of Shashotep, is also identical with Shay, the god of Destiny. In a note on Khnum in *Journal*, XII, 226, Griffith remarks that he was the chief god of Shashotep, "where Shau (*sic Psais*, Destiny) was appropriately associated with him as a subordinate deity." Shay was god of Fate as well as of the vineyard and harvest. His name frequently occurs in Egyptian inscriptions. At El-'Amarnah³, Akhenaten is the *shay* who gives life. In late texts⁴ "his *shay*" is sometimes substituted for "his *ka*," and in an Eighteenth Dynasty tomb at Thebes there is an inscription⁵ which reads "bringing all kinds of good things for Amenemhet [the owner of the tomb], and for his *ka*,.....for his *sha*,...for his *akhu*,...and for all his modes of being." It is interesting to note that in this inscription *shay-f* is written , and that the last two signs have been written over a deleted  which can be clearly seen in the original. I may remark here that it is a rule in totemism—and Egypt, as Sir James Frazer has truly said, is "a nest of totemism"—that when a clansman dies he is supposed to join his totem and to assume the totem's form. It was for this purpose that the numerous "Transformation Spells" which are found in the Coffin Texts⁶ and in the later *Book of the Dead*⁷ were composed; these spells were written to enable a man to change himself into his totem, whether it was an animal, or a plant, or an insect, or an inanimate object. To secure himself fully he composed the spell⁸ whereby a man may change into "anything that he desires." In the tomb of Paheri⁹ at El-Kâb there is a very interesting text which bears upon this subject. "O excellent satisfier of the heart of his master," it runs, "mayest thou go in and out, thy heart enlarged, in the favours of the lord of gods; a good burial after a long life of honourable service: when old age comes and thou arrivest at thy place in the coffin and joinest the earth in the necropolis of the West, becoming a living . O! may it enjoy bread, water, and breath, may it make its transformations into a  heron,  swallow,  hawk, or  egret, as thou desirest." Much has been written upon the meaning of the words , , , etc., but in my view they were originally only local names of the totems into which the men of different clans passed at death. Later the original meaning was forgotten and the Egyptians began to regard the words as denoting distinct entities, hence the plurality of souls!

¹ In a Hymn to Osiris on a tomb-stone of the Eighteenth Dynasty in Paris Osiris is said to be "very terrible in Shashotep" (ERMAN-BLACKMAN, *The Literature of the Ancient Egyptians*, 141). There was a place in Nubia named  *Shascheryt*, "(the city) terrifying Sha." Here it was that Horus overtook and defeated the Companions of Set, at the time of the great Set rebellion. I pointed this out originally in *Klio*, XII, 402; see further on the Set rebellion my paper in *Ancient Egypt*, 1917, 44. On the situation of Shascheryt see SCHAFFER, *Beiträge zur alten Geschichte*, IV, 152-6.

² Middle Kingdom, GRIFFITH, *op. cit.*, Pl. 16, line 20; New Kingdom, *ibid.*, line 16; *Pap. Harris*, Pl. 61 a, 14; Ptolemaic period, PETRIE, *Gizeh and Rifeh*, 33; MARIETTE, *Dendera*, IV, Pl. 40.

³ DAVIES, *El Amarna*, II, Pls. vii, viii.

⁴ G. MÖLLER, *Die beiden Totenpapyrus Rhind*, I, 10, d. 14; hieroglyphic text  equals *psî-f šî* in demotic text.

⁵ GARDINER-DAVIES, *Tomb of Amenemhet*, Pl. xix, p. 99, n. 3. In regard to the determinative of the word (which is translated "seal of fate"), Gardiner says that he has "no parallel."

⁶ LACAU, *Tectes religieuses*, Nos. xvi, xvii, etc.

⁷ NAVILLE, *Das ägyptische Totenbuch*, I, Chapters 77-89.

⁸ NAVILLE, *op. cit.*, Chapter 76.

⁹ TYLOR-GRIFFITH, *The Tomb of Paheri*, Pl. ix, ll. 5-6, p. 29.

VII. On the Former Identifications of the Cult-animal of Set.

The identification of this animal has long been a puzzle to Egyptologists. Many scholars have held to the opinion that the creature was a purely imaginary one, that it was, like the Sphinx or the Griffin, a compound animal. This opinion was held by CHAMPOLLION (*Not. descr.*, 360), ROSELLINI (*Mon. civ.*, II, 218), LEPSIUS (*D., Text*, IV, 778), BORCHARDT (*Zeitschr. f. äg. Spr.*, XLVI, 90), ROEDER ("Set" in ROSCHER'S *Lexicon*

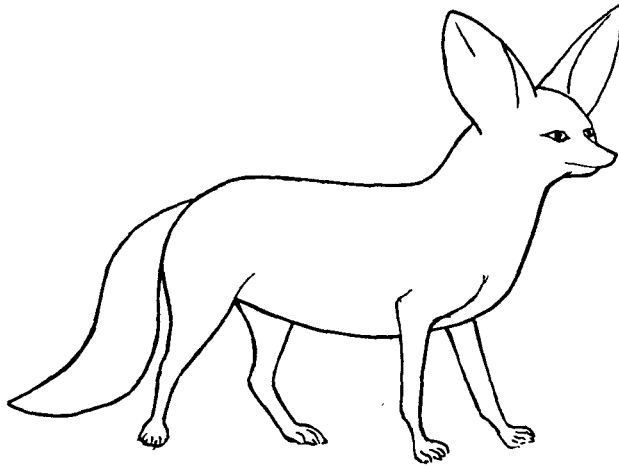


Fig. 13. The fennec.

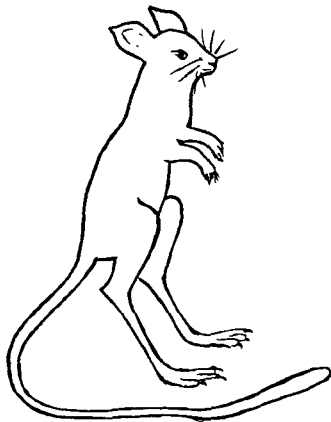


Fig. 14. The jerboa.

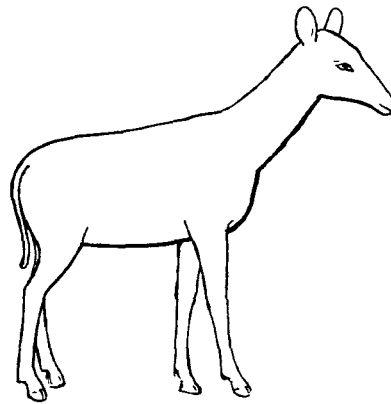


Fig. 15. The okapi.

der griech. und rom. Mythologie, III, 1165 sq.), and BÉNÉDITE (*Journal*, v, 227). PLEYTE (*La religion des Pré-Israélites*, 1862, 187) thought that it was a degenerate form of an ass, but later (*Quelques monuments relatifs au dieu Set*, Leyden, 1863) he suggested that it might be an oryx, and this seems also to have been at one time the opinion of HEINRICH BRUGSCH (*Religion und Mythologie der alten Aegypter*, 1890, 703, 786), although the latter scholar had earlier (*Wb.* 1422) suggested that it was a greyhound. ERMAN (*Handbook of Egyptian Religion*, 20) remarked that "the animal by which Set is represented, or whose

head he wears, was considered in later times to be a donkey¹, although at least it could only have been a caricature of one. Probably it was intended for some animal with which the Egyptians of historical times were not familiar." MAX MÜLLER (*Egyptian Mythology*, 1918, 102-3) suggested that it may have been derived from "an animal which had, perhaps, become extinct in prehistoric times, or that the figure of it had been drawn from an archaic statue of so crude a type that it defied all zoological knowledge of subsequent artists." BÉNÉDITE (*Journal*, v, 227) seems to have had a suspicion that, although the Set-animal was an imaginary creature, it merely "replaced a real one which very early disappeared from the Egyptian horizon, or else subsisted but was unrecognised." MASPERO (*Dawn of Civilisation*, 1895, 103, 108) thought that it might be the fennec (see Fig. 13) or the jerboa (see Fig. 14). WIEDEMANN (*Religion*, 1897, 117, 221) remarks that the head bears some resemblance to a camel's head, but later (*O.L.Z.*, v, 220, and *Umschau*, 1902, 1002) he identified the animal with the okapi (see Fig. 15), and in this identification he has been followed by EDUARD MEYER (*Hist. de l'antiquité*, II, 1914, 86), BREASTED (*History*, 1920, 32), and GAILLARD (*Bull. de la Soc. d'Anthropologie de Lyon*, XXII, 1903). THILENIUS (*Rec. trav.*, XXII, 216) considered that it represented the long-snouted mouse (*Macroscelides*). LEFEBVRE (*Sphinx*, II, 63-74) identified it with "un chien,

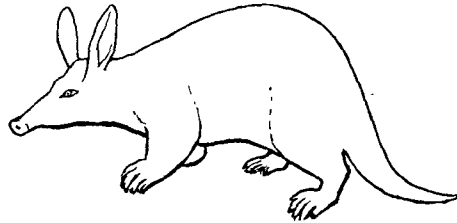


Fig. 16. The Aard Vark.







Fig. 17. The Ass.

et plus spécialement un lévrier," and LORET (*Proc. Soc. Bibl. Arch.*, XXVIII, 1906, 131; cf. *Bull. de l'Inst. franç. du Caire*, III, 20) says "un lévrier d'un genre tout spécial." SCHWEINFURTH (*Umschau*, 1913, 783; *Ann. Serv.*, XIII, 272) thought that it might be the Aard Vark (*Orycteropus aethiopicus*) (see Fig. 16). Von Bissing suggested a giraffe (*Rec. trav.*, XXXIII, 18). In 1912 (*Klio*, XII, 401) I noted that it certainly belonged to the pig family, and that it was possibly the Wart Hog. In 1917 (*Ancient Egypt*, 1907, 44) I again stated my belief that it must be a pig of some kind. Daressy had come to much the same conclusion in 1917 (*Bull. Inst. franç. du Caire*, XIII, 89 ff.) but he identified the animal with the Wild Boar of Europe (*Sus scrofa*). The grounds on which he made this identification are remarkable. "L'idée," he writes, "que je voudrais soumettre est que le sanglier est le véritable animal réprouvé. La malfaisance de cette bête dangereuse, farouche, destructrice des récoltes, la rendait bien digne de symboliser le génie du mal et toutes les sensations douloureuses; mais vu l'influence funeste de son seul aspect on avait décidé de lui substituer dans les représentations un animal dont tous les caractères seraient juste l'inverse de ceux du *Sus scrofa*."

¹ In Fig. 17 I give a drawing of a hieroglyph for Set which is found on the Early Middle Kingdom coffin of Ankhef from Asyût which is in the British Museum. Here the animal certainly has an ass's head. This is the earliest instance that I know of, of the Egyptians identifying the Set-animal with the ass.

VIII. The Wild Boar (*Sus scrofa*) in Egypt.

The Wild Boar (*Sus scrofa*), Egyptian  *rrî*, fem.  *rrw-t*, Coptic $\pi\rho\pi$, frequented the marsh-lands of Lower and Middle Egypt and survived in the Delta, Fayyûm, and Wâdî Natrûn, till the end of last century. This animal is figured by ANDERSON (*Zoology of Egypt, Mammalia*, Pl. lxiii, 354-5), who states that "so far as is known, the wild pig of Egypt does not differ from the typical form of Europe." As a hieroglyphic sign the animal appears on First Dynasty sealings (PETRIE, *R.T.*, I, Pl. xxvi, 60); it is seen also in two early place-names:— "pig-bane" (PETRIE, *Medûm*, Pl. xxi, end of Third Dynasty), and  "pig-destroyer" (MASPERO, *Trois années de fouilles*, in *Mém. de la Mission arch. franç. au Caire*, I, 191, Fifth Dynasty). The wild animal is not represented in any of the hunting scenes of the tombs of the Old, Middle, or New Kingdoms, but wild (?) pigs are figured in a marsh scene in a Middle Kingdom tomb at Beni Ḥasan (NEWBERRY, *Beni Ḥasan*, II, Pl. xi). In Roman times the animal was hunted in the Fayyûm. Among the Greek Papyri in the Rylands Library at Manchester is a letter (*Pap.* No. 238) written in A.D. 262, by one Alypius to his steward, relating to a boar hunt. The steward is instructed to supply the huntsmen and their animals with "everything that they are accustomed to receive so that they may hunt with zeal." In the first half of the eighteenth century A.D., Dr. POCOCKE (*A Description of the East*, London, 1743, I, 17) notes that he was informed that about the convents of the Wâdî Natrûn there were a great number of Wild Boars. According to Col. FLOWER (*ap.* ANDERSON, *op. cit.*, 354) a few specimens still survived in that locality towards the end of last century, and he says that steps were being taken to preserve them there. Sir GARDNER WILKINSON (*Modern Egypt and Thebes*, 1843, I, 446) states that in the first half of the nineteenth century Wild Boars were numerous in the marshes near San (Tanis) and also about Nader on the east bank of the Nile. They were also to be found in many other parts of the Delta, particularly in the low marsh-lands to the north, and about Lake Menzâlah as well as in the Fayyûm. Wild Boars were frequently seen about thirty years ago in the neighbourhood of Damietta; the natives used to shoot them and bring them into the town slung across a donkey's back. They were obtained from the marshy ground to the west of Farascon, not many miles from Damietta. Between Ressendila and Lake Burlos it is also said that many were to be seen (ANDERSON, *op. cit.*, 354)¹.

1 [The Editor regrets the long delay, due to lack of space, in the publishing of this article, the manuscript of which was received in October, 1927.]

EGYPTIAN NATIONALISM UNDER GREEK AND ROMAN RULE¹

By J. GRAFTON MILNE

The conquest of the Persian Empire by Alexander of Macedon brought Egypt, for the first time in its recorded history, under a European ruler. Invaders of various races had broken into the Nile Valley in previous generations, from East, West, and South; and some of them had established themselves there for considerable periods: but the country was always secured against attack from the North by the impassable barrier of the Delta marshes; and it was not till the Greeks² had captured Western Asia that they could get hold of Egypt. They were not entirely unknown there: trade had been carried on between Egypt and Greek countries at several periods: during the centuries when Crete dominated the Levant, there is much evidence of intercourse between Crete and Egypt: when the centre of Greek power had shifted to Mycenae, the cities of Greece proper are shown by finds to have kept up the communication: and when a new Hellas was developing itself by colonial expansion, the leading mercantile cities joined in the establishment of a depot in Egypt at Naukratis. But the influence, moral or material, of these traders on Egypt was negligible: they simply went for business, or at most travelled up the country to see the sights as tourists³: the fragments of the so-called wisdom of the Egyptians found in Greek writers before the time of Alexander show no real knowledge of Egyptian life or literature, and even a keen observer like Herodotus reported nothing but external appearances and superficial talk: while there is no trace on the Egyptian side that any native knew or cared anything about Greek ideas.

The establishment of a Greek kingdom in the country, therefore, presented an entirely novel set of problems. None of the alien dynasties which had ruled Egypt, in all probability, was so totally distinct in its mentality from the Egyptians as the Greek: yet, if Greek rule was not to be a purely military domination, it was necessary for some kind of fusion of Greeks and Egyptians to be effected: and the whole policy of Alexander, in the organization of his empire, was aimed at securing such a fusion of races in each province—in other words, at the Hellenization of the Near East. His early death left his organization little more than a sketch: but Egypt had the fortune, in the division of his empire among his generals, to fall to the lot of one of the shrewdest, who had been with Alexander during his stay in Egypt and may well have been his confidant in the plans which he made for dealing with the country: and it is most likely that the scheme adopted by Ptolemy son of Lagus was essentially an embodiment of the ideas of Alexander⁴.

¹ A lecture delivered to the Glasgow and Edinburgh Egyptian Societies in November 1927.

² For the purposes of this paper, Macedonians are regarded as Greeks.

³ This applies equally to Greek mercenary soldiers serving in Egypt.

⁴ It had many points in common with the scheme of Seleucus in Syria, which suggest a common source.

Ptolemy's leading principle was "peaceful penetration": he made no display of armed force. There was one great military settlement, but it was planted in a position chosen with notable skill, in the oasis of the Fayyûm, which, while it commands the great artery of traffic at the head of the Delta, and forms a salient for protecting the Western frontier, is outside and shut off from the main valley of the Nile, so that the soldiers there would be unobtrusive. The two centres of Greek life, which were to be the nuclei for the Hellenization of Egypt, were Ptolemais in Upper Egypt and Alexandria on the coast—both essentially civilian foundations, organized on the Greek model as self-governing cities. In none of these three cases was there any substantial expropriation of the natives: the soldiers in the Fayyûm were settled on newly-reclaimed marsh-land: Alexandria grew up on a ridge of sandbanks, previously occupied at most by a few fishermen's huts: and the village of Psoi, which had stood on the site of Ptolemais, was so insignificant that it has left nothing but its name.

From these centres the light of Greek culture was to permeate Egypt. But Ptolemy proceeded warily on his way in introducing Greek ideas: his treatment of the religious system may be taken as typical. There was no interference with the Egyptian worship—such action would have been contrary to Greek practice: the natives were free to, and did, continue the customary rites of their ancestors in the old temples, the king assumed the traditional position of the Pharaohs in relation to them, and a rather haphazard identification of Egyptian with Greek divinities helped to suggest a community of interests. But the keynote of the Ptolemaic plan is to be found in the introduction of a new cult, which contained both Egyptian and Greek ideas, and, adopted as the official State worship, was no doubt intended to supersede all minor deities. This was to be provided by the invention of Sarapis—a really remarkable event in religious history, when a committee of scholars sat down and compounded a god out of elements derived from various nations and religions and selected to suit the needs of the moment as they understood them: Sarapis, with his consort Isis and their child Harpokrates, was to be attractive to Greek and Egyptian alike, and to form the bond of religious union. At the same time this measure gave the State a chance of controlling the Church without upsetting established interests; the new worship could fitly be placed under the administration of Royal officials, while the old foundations could be left to themselves, in the hope that they would fade before or be absorbed into the more brilliant novelty.

However carefully veiled by ceremonies and attributes borrowed from Egyptian sources, the Greek spirit was predominant in the original conception of Sarapis, with the object, presumably, of drawing those who worshipped him into the Greek circle: and similar indirect ways of Hellenizing the Egyptians were found in other quarters. Greek was, of course, the official language: and, though there is no trace of compulsion to its adoption, and the old language and script continued to be used, it was natural that Egyptian boys who wished to make their way in the world should learn Greek, and to this end schools were established for them. Greek schools brought with them Greek sports, in the form of the gymnasium, and before long this institution appeared even in such an eminently Egyptian city as Thebes. The Museum at Alexandria collected scientists and engaged them in preparing compendia of Egyptian learning for the benefit of the world generally, in a Greek dress. The commerce of Egypt was brought into conformity with Greek practice by the adoption of coined metal as a medium of exchange. Instances of this kind might be multiplied, but these must suffice: we must now see what were their results:

The main features of the scheme of Hellenization had been developed before the

death of Ptolemy I in 283 B.C., though some additions to it were made by his son: but it was very shortly after this that the first sign of reaction can be found, in a concession to Egyptian prejudices in the matter of currency. Ptolemy had based his monetary system, in the usual Greek way, on a silver standard, with gold as a metallic ratio for higher values, and copper as a subsidiary token-coinage only: but Egyptian merchants were accustomed to quoting prices in copper, and evidently objected to the introduction of a strange metal, since about 270 B.C. the system was rearranged and the principal part of the currency formed of copper, no longer in small coins of the size usual in Greek cities, but in huge pieces apparently rated as bullion. This was the first step in a process which led, in a few more years, to the recognition of copper as the standard for internal currency, while silver took a secondary place. It is significant that the obverse type of these big copper coins was the head of a god with local affinities—Ammon—whereas the types used previously had been the heads of Alexander, Ptolemy, or the Greek Zeus.

Evidence of the revival of the native race is to be found in the increasing numbers of men bearing Egyptian names who are mentioned as holding official positions in and after the latter part of the third century B.C. It might be argued that this only shows that the Egyptians were profiting by Greek education so as to get into Civil Service or other posts: but a measure of the extent to which they brought Egyptian ideas into their work is given by a comparison of two great inscriptions, the decree of Canopus and the Rosetta stone, both drawn up under similar conditions by priestly colleges at an interval of less than half a century. The first, in 237 B.C., runs much on the lines of a Greek decree: the second, in 196, reverts to Egyptian formulae. In both cases the text is given in Greek and Egyptian, but in the first the Greek version seems to be the original, in the second the Egyptian. Another very significant event was that, when Ptolemy IV had to meet an attack from Syria in 217, he raised and incorporated in his army a large body of native troops, who played an important part in the defeat of the Syrians at Raphia.

To some extent this native revival was due to the feebleness of the royal house. If Egypt was to be brought under Greek influence, it could only be done by judicious nursing: so long as the kings were capable—as it may fairly be said the first three Ptolemies were—there was a certain spread of Hellenization: but as soon as the race deteriorated, which it did very markedly in the next generation, the movement ceased and old ideas began to come to the surface again. And not only were the later Ptolemies incapable, but, during the latter half of the three centuries for which their house ruled Egypt, they were constantly quarrelling amongst themselves: from 180 B.C. till the Roman conquest, there was nearly always some claimant to the throne awaiting an opportunity to upset his kinsman in possession, and ready to adopt any means to secure this end. So, as it was naturally the aim of each party to win the support of the natives, and the obvious way of doing this was by bribing them with favours and concessions, the Egyptians profited by the quarrels of their kings. The power and property of the priesthood, in particular, increased rapidly: the more influential they became, the more important it was to win them over, and the more heavily they had to be paid.

At the same time it appears that the Greek settlers in Egypt, apart from the purely official class, instead of Hellenizing the Egyptians, were themselves becoming Egyptianized. So far as they were engaged in farming or trading, their interests were much the same as those of the natives: it was no longer any advantage to a man to retain Greek nationality and Greek habits, as a link with the government, when the govern-

ment was divided against itself and favours were given indiscriminately to anyone who would take a side: and, in the natural order of things, the life of the farmers was assimilated to the tone of the country where they dwelt. Even in Alexandria, where Greek influence should have been strongest, we have the statement of Polybius that, when he visited the city in the latter part of the second century B.C., he found that the section of the population which had originally been Greek had become a mixed race and was no longer truly *πολιτικόν*—it did not possess the essential virtue of the member of a Greek community: and the remarks of Roman writers in the next century show that the estrangement from European customs had gone steadily forward.

The history of Egypt under the Ptolemies is still very fragmentary, but there is enough evidence as to the condition of the country in the last years of the dynasty to enable us to form some estimate of the extent to which the plan of Alexander and Ptolemy I had really affected the natives, when the Romans came in and supplanted the Greek government. Of the lower classes of the population, indeed, there is hardly anything to be said: they were regarded by the Greeks as serfs, outside the scope of any scheme for the regeneration of Egypt by Greek ideas and incapable of benefiting by Greek culture: they remained as they had always been, mute and inglorious. It was the middle and upper classes to whom the apostles of Hellenism had directed their attention: and the middle classes at any rate, the farmers and traders, as we have just seen, had coalesced to a considerable extent with the Greeks of their own rank and formed a mixed Graeco-Egyptian race: but the resultant was more Egyptian than Greek. It is true that there was a veneer of Greek learning among them: they spoke and wrote Greek—very badly, for the most part, if judged by the letters preserved on papyri—and the occasional occurrence of tags from Greek literature suggests that Greek authors were read in schools: but the purport and spirit of what they wrote was essentially Egyptian. Again, the Greek institution of the gymnasium continued to exist in the towns, and officials were chosen to preside over it and provide for its maintenance: but there is scant evidence that it was ever used in the Greek manner for the training of the body and the practice of physical exercises: it seems rather to have become a sort of select club, membership of which conferred a social distinction, and was used more as a lounge than for athletics. The best test, however, is to be found in religion: and here it is quite clear that the scheme of Hellenization had failed. The new god Sarapis, who was to have been the supreme object of worship for Greeks and Egyptians alike, had not caught the fancy of either, and, in spite of the attempts of the government to push his cult and the foundation of temples dedicated to him in all provincial centres, the evidence of papyri, inscriptions, and artistic representations goes to show that Isis and Harpokrates, the more Egyptian members of the triad, were infinitely more popular with the mass of worshippers, and Sarapis himself gradually tended to revert to the character of Osiris, the original Egyptian consort of Isis, who had been used as one of the elements in his composition. Even the great temple of Sarapis at Alexandria was invaded by Egyptian ideas, and that at Memphis, which ranked second in importance, is shown by a curious group of documents to have been thoroughly Egyptian in spirit as early as the middle of the second century B.C.: the papers of Ptolemy son of Glaucias, which chance has preserved, reveal him and others, by their names men of Greek blood, living a characteristically Egyptian and utterly un-Greek life as recluses in the temple precinct. It is rather remarkable, and a token of the strong Hellenic element in the conception of Sarapis, that his worship was more popular at this time outside Egypt than in it: temples and guilds of Sarapis were founded at many ports in the

Eastern Mediterranean, and still flourished under the Roman Empire, when in Egypt itself the god was ignored by the lower classes and only remembered perfunctorily by the upper. The really important temples, both in wealth and in popularity, were those of the old native deities: as we have seen, the power of their priests increased rapidly under the feeble rule of the later Ptolemies, and they maintained a purely Egyptian ritual. Several of the great temples now standing, such as Dendera, Edfû, and some of the buildings at Philae and Thebes, were erected or reconstructed during the Ptolemaic period, and they adhered to the old Egyptian style of architecture and decoration, with only slight traces of Greek influence in details of technique, while the inscriptions on the walls, in the old hieroglyphic characters, follow the old formulae. In short, the attempt to Hellenize Egypt had produced only a superficial result—nothing comparable to that achieved in Syria by the Seleucids, where there had been a genuine infusion of Greek culture into the minds and lives of oriental peoples: there had been no open nationalist opposition to it, but none had been necessary. Ptolemy I, as already suggested, had sought to do his work by peaceful penetration, to which the Egyptians had simply replied with passive resistance: and the passive resistance had been effectual.

The Roman conquest completely changed the situation: the Ptolemaic policy was thrown to the winds, and there was no longer any idea of bringing Egypt into the circle of European civilization: the sole object of Augustus and his successors was to exploit the country as a source of revenue, particularly in the form of corn, which was shipped off to Rome and distributed there as an antidote to Republicanism. No attempt was made to Romanize the Egyptians, or even to settle Romans there on any system: practically the only Romans who appeared in the country were civil or military officials holding short-term posts, and merchants whose stay was even shorter. It is true that there was some infusion of "Roman citizens" among the natives, in the form of veterans who were serving in the army of occupation in Egypt when they took their discharge, and settled down there: but these soldiers were recruited from all parts of the Empire, and were not of a type to raise the level of culture in the districts where they finally made their homes.

The policy adopted by Augustus was one of compulsion pure and simple: the country was garrisoned with an army of three legions to keep it quiet, and an elaborate machinery was devised for assessing and collecting the taxes, which secured that the uttermost farthing was squeezed out of the natives. And it was not only the Egyptian fellahin who were to be the milch-kine of the emperor: the Greeks too were treated as part of the spoils of war and subjected to exactions quite as burdensome as those of the Egyptians. At the same time the priests, who, as we have just seen, had recovered much of their old influence and accumulated considerable wealth under the later Ptolemies, were brought under strict control: their property was confiscated and they had to exist on a fixed allowance from the State, thereby losing not only money but position. The result was one which commonly follows on persecution: the persecuted cause was strengthened, and the Romans were hardly established in the country when the nationalist spirit, which had been quiescent under the Ptolemaic system of toleration, began to assert itself, the more effectually because the Greeks, who had already realized to some degree their community of interests with the Egyptians, were now more closely linked to them in a fellowship of misfortune.

In fact, the first serious disturbance with which the Romans had to deal in Egypt, after the desultory fighting which went on for two or three years after the conquest, was headed by the Greeks of Alexandria, and the circumstances are significant. The

immediate object of their attack was, not the Roman garrison, but the Jewish community, an important body of merchants, at Alexandria. The Jews had long been established there and throughout Egypt, and under the general toleration of the Ptolemies had got on well enough with both Egyptians and Greeks. But Augustus chose, for some reason, to favour the Jews at the expense of the Greeks: he deprived the Greeks of Alexandria of their local powers of self-government by a senate, while he confirmed the Jews in all the privileges they had enjoyed. This, naturally enough, exasperated the Greeks against the Jews: when they saw their competitors in business placed in a more favoured position than their own, they regarded them as the representatives or the tools of the Roman oppressors, and started a series of attacks on them which continued intermittently for about a century. References to some of these attacks are to be found in contemporary historians: but a much more picturesque, though fragmentary, account has been obtained from papyri which contain parts of what have been termed the Acts of the Alexandrian Martyrs. This is of course a partisan document, intended to glorify the leaders of the Nationalists who suffered death for opposing the Roman emperors: but the noteworthy fact, for the present purpose, is that it is the recognized heads of the Greek community, the gymnasiarchs, who regularly appear as the leaders and spokesmen of the Egyptian party and are punished accordingly. It is evident that in Alexandria the fusion of Greek and Egyptian interests was practically complete in opposition to the Romans.

The distribution of parties in Egypt was altered at the end of the first century A.D., when the destruction of Jerusalem had made the Jewish zealots into an implacable anti-Roman body. The responsible leaders of the Jewish community at Alexandria strove to keep their people from a breach with Rome: but they were overborne, and the disastrous Jewish rising of A.D. 115, which during three years' guerrilla fighting laid waste a large area of the Nile valley, forced the Graeco-Egyptians in self-defence to side with the Roman government. But when they had aided the Romans to crush the Jews, they got no reward in any alleviation of their burdens: some temporary reductions of assessments seem to have been made in places, but the old system remained in force, and ruin proceeded apace.

Half a century later the first great peasant revolt took place: it was not headed by Greeks or Graeco-Egyptians, for by this time the Graeco-Egyptian class had been taxed into impotence, but by an Egyptian priest—a new and significant phenomenon. For nearly a century there had been indications that the national religion was reviving from the blow dealt to it by Augustus, but this was the first occasion on which it had provided a leader for a popular rising. The course of the struggle was marked by incidents which in their fanatical savagery were more Egyptian than Greek: and it is probable that the bulk of the rebels were natives, small farmers and labourers who had been driven from home by over-taxation and had taken refuge in the marshes of the Delta to live by brigandage. Official documents of the period from A.D. 150 to 250 which have been preserved are full of reference to the problems of the desertion of the land and the growth of freebooting—an analogy to which, as an expression of nationalist spirit, may be found in the story of Robin Hood.

In the turmoil of the third century, it more than once seemed likely that Egypt would be severed from the Roman Empire, either as an independent kingdom or as a province of an oriental monarchy: and the natives welcomed and supported leaders or invaders from any quarter who offered them a hope of deliverance from the yoke of Rome. But the military recovery of Rome under Aurelian and Probus reduced Egypt to subjection once more, and the reorganization under Diocletian seemed to have bound

the fetters of serfdom more firmly than ever, when a new chance of national development was afforded by the official recognition of Christianity in the reign of Constantine.

The first way in which the Egyptians who desired to secure freedom from the demands of the Empire sought to profit by its changed attitude towards religion was through monasticism. The eremitic habit of withdrawal from the world is one which seems indigenous in Egypt—something of the kind had been known there centuries earlier—and when it became possible for a man who was ruined by the exactions of the government, instead of betaking himself to brigandage, to secure a position which, if not exactly comfortable, was at any rate respectable, by merely disclaiming all connexion with mundane affairs, the practice of self-dedication to the contemplative life became popular so rapidly that in A.D. 373, little more than half a century after the recognition of Christianity, the Emperor tried to check this practice by edicts. But the hermits banded themselves together in monasteries, and these organized communities proved powerful enough to defy the Emperor: they became the controlling authorities and owners of large districts, in which nearly all the inhabitants were under religious vows and paid more heed to the orders of their ecclesiastical heads than to those of the government. A well-known instance of the way in which the monks could and did flout the representative of the Emperor, even in the capital of the country, is to be found in the events leading up to the murder of Hypatia in 415.

But the nationalist spirit showed itself even more strongly in the organization of the Egyptian Church. From the first days when Christianity gained an imperial standing, it had been evident that there were fundamental differences on points of doctrine between the theologians of Alexandria and of Constantinople—in other words, the Egyptians and the Greeks had entirely different philosophies of religion, and worked out their definitions of their creeds on entirely different lines. The Emperors, having accepted the position of patrons of the Church, were dragged into the controversy: the more prudent of them tried to find a way of compromise between the parties, but without success: the breach became ever wider, and, as the Emperor at Constantinople was usually under the influence of the patriarch of that see, religious bitterness increased the political estrangement of Egypt from the Empire. In the middle of the fifth century the Council of Chalcedon witnessed the real severance of the Egyptian and the Greek Churches: for some decades after this the history of the Alexandrian patriarchate is an unedifying one of unscrupulous manœuvring by both parties, but when Justinian at last tried to settle matters with a high hand, and invested his nominee to the see with temporal powers to maintain his spiritual position, the Egyptians flatly refused to have anything to do with him, and thenceforward elected a patriarch of their own without regard to Constantinople.

While the Egyptian Church had been making itself more and more independent, the local landowners had also been working out their own salvation. Just as the Emperors in the fourth century issued edicts which were intended to prevent the peasantry of Egypt from escaping their obligations to the State by placing themselves under the wing of the Church as members of religious communities, so they issued other edicts against patronage—that is, the practice which was growing up among the smaller farmers of making themselves the serfs of a powerful neighbour who was in a position to defend them against the exactions of the tax-collectors and the bullying of the soldiery. But the one set of edicts was as futile as the other: in spite of all the imperial efforts to check it, the system of patronage grew until in many districts of Egypt the government was obliged to recognize these local magnates as the effective rulers of their estates: theoretically they acted as the deputies of the Emperor in such matters as the collection

of taxes and the maintenance of order: but it would appear that they simply paid over a lump sum in respect of the taxes assessed on the villages they administered, like tributaries rather than agents: and they policed their lands with armed retainers, who on various occasions proved themselves more efficient than the imperial troops and enabled their masters to act as independent authorities. These magnates, on the evidence of their names, were mainly Egyptian in race, and were clearly Egyptian in sympathies: and they entered into a kind of alliance with the national churches, of which they are found acting as patrons, in several places. It is instructive to compare them with the provincial nobility of the Western Empire, who, in the decay of the central power, had been forced to organize their own districts for self-defence against barbarian invasions: certainly in Gaul, as to which there is most information, and probably also in Britain, the basic idea of these nobles was the maintenance of the connexion with Rome and Roman civilization, as contrasted with the desire of the Egyptian lords to cut themselves free from it: a notable instance is the attempt of the Gaulish prince Syagrius to uphold the cause of Rome against the Franks in the valley of the Seine, and I have little doubt that in Britain King Arthur similarly regarded himself as the representative of Rome against the Saxons.

Thus by the end of the sixth century there was not much of Egypt left under the effective rule of the Emperor: the country was parcelled out into semi-independent estates, somewhat resembling the feudal lordships of mediaeval Europe, interspersed with large areas controlled by religious corporations: and, if one of the magnates had possessed sufficient genius for leadership of his fellows, Egypt might have achieved its freedom. But, before this could happen, the Persian and Arab invasions subdued the country and completely swept European control out of it for many centuries, to be replaced by a government which, if not Egyptian, was at any rate oriental, and so more instinctively sympathetic to Egyptian ideas and customs than any Greek or Roman ever was.

The Roman dominion in Egypt had lasted more than twice as long as the Greek, but it made far less contribution to the development of the country: in fact, so far as the introduction of European ideas was concerned, its chief result was to undo nearly all that the Greeks had done. The Ptolemies had brought Greek settlers into Egypt and established Greek institutions: and, though the Greeks did not maintain either their race or their culture pure, but fused with the natives into a Graeco-Egyptian class, whose customs and ideas were a mixture derived from both sources, the element of Greek in the mixture was quite appreciable: the Greek language was established in the educated classes as the ordinary medium of communication, and certain Greek habits of life had been adopted in the towns: the composite religion too, though the Egyptian traits in the conception of the deities became gradually more prominent, preserved a good deal of its Greek dress. But Hellenism was an artificial culture—an exotic plant introduced to Egyptian soil, which needed to be tended carefully and fed with Greek stimulants, if it was to flourish and maintain its specific character: if it was neglected, it could only live by assimilating itself to its surroundings. And the Romans did not merely neglect Hellenism in Egypt: they crushed it out of existence: and when a new growth of culture appeared, it was very naturally one of a kind indigenous to the country.

This point may be illustrated by the revival of the national language under the Romans. For literary purposes, its use had practically ceased at the time of the Roman conquest: it is true that inscriptions in the old hieroglyphic characters continued to be cut on the walls of temples—the latest dated one is of A.D. 250—but they were

an archaistic survival, probably regarded more as a necessary feature in the decoration of the building than as an intelligible record of facts: and documents written in demotic become rare after the middle of the first century. But it is evident that Egyptian was still spoken among the lower classes, and just when the old script was finally disappearing the language was resuscitated in the form of Coptic, which, though it adopted Greek characters and borrowed Greek words, was philologically the direct descendant of the old Egyptian. As Christianity established itself, Coptic rapidly became the recognized tongue of the Church, at first perhaps as a convenient means of reaching the lower classes of the population, then as a distinction from the adherents of the pagan religion, finally as an assertion of national independence against the Greek-speaking churches under the patriarch of Constantinople. This resulted in the revival of a national literature—if the lives of the fathers and martyrologies can be called literature—which is interesting on account of its avoidance of Greek spirit despite its borrowing of Greek forms. For Egypt, notwithstanding the presence of the Museum at Alexandria, never caught the literary inspiration of Hellenism as Syria had done: not only Antioch, but many lesser towns of Syria, produced writers who carried on the great traditions of Greece, some rising to the first rank: but the eminent professors who were imported to fill the chairs at the Museum at Alexandria, if they lectured at all—which is rather doubtful as regards the Roman period—did not rouse their hearers to literary activity. On the other hand, the Christian rival of the Museum, the catechetical School founded by Pantaenus and developed by Clement, trained a series of able controversialists who, though they wrote in Greek and were often well acquainted with Greek literature, were definitely anti-Greek in their line of thought and gave the keynote for the distinctively nationalist theology of later centuries which found expression in the Coptic ecclesiastical writings.

Here and there, a dying flicker might be seen amid the ashes of Hellenism in Egypt: the last clear flame is Nonnus of Panopolis: but by the time of the Arab conquest all was quenched, and Egypt had subdued the European invader.

THE CEMETERIES OF ABYDOS: WORK OF THE SEASON 1925-26

BY H. FRANKFORT

With Plates xx-xxiii.

I. STELAE.

The stelae recovered in the last season's work in the Cemeteries of Abydos were all found loose in the drift sand, or re-used as paving-stones in late tombs, but never in connexion with the tombs for which they were originally intended; they may well, therefore, be treated by themselves.

Old Kingdom.

No. 23 (Pl. xx, 3). Limestone, 1.06 by 0.25 m., probably an architrave from a tomb. On the left are depicted the deceased and his wife, holding a perfume-vase and a flower respectively, seated side by side on a couch, the lion-feet of which rest on stone cones. Both wear a composite bead necklace, the woman a short and the man a long wig, and the latter the "full-dress" loincloth (to judge by the folds) which was worn with a more or less ornate girdle on festive occasions. (BONNET, *Aegyptische Tracht*, 40 ff.; ERMAN-RANKE, *Aegypten*, 234.) The man is called *the venerable Shenay*, while in the column in front his name is accompanied by the titles *Mayor* and *Real Friend*. Over and behind the woman one reads *his beloved wife Neshememhet*.


In front of the pair stand their two sons, *his beloved eldest son the courtier* ("friend") *Ideky*, who offers incense to his parents, and *his beloved son Inpuiam, surnamed Mury*, who wrings the neck of a goose for them. The sons are dressed in striped loincloths which are not very clearly rendered; that of the elder son especially seems garbled; it may be that a fringe is indicated.



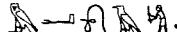
The main inscription consists of a short funerary formula in the first line, and further of words said by Shenay, who leans leisurely on a stick on the extreme right of the stone. This figure is, in contrast to the others, of some artistic merit; particularly remarkable is the subtle contrast between Shenay's left leg, which carries his weight, and his right leg, which is loosely bent forward. The somewhat peculiar style of both representations and inscriptions would make it difficult to assign a date to the stone; the emaciated figures on the right and the use of *relief en creux* are links with the Middle Kingdom. But the main inscription shows in a number of its phrases such definite parallels with late Old Kingdom texts that it seems impossible to remove it far from these.

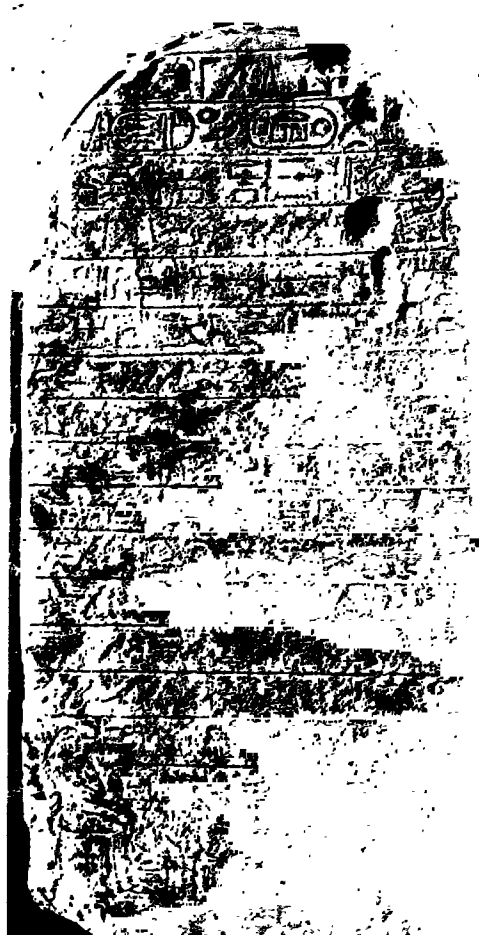
The main inscription runs:

(1) *A boon which the king gives and Osiris, invocation-offerings of bread and beer of the Mayor and Real Friend, honoured with the great god, Shenay.* (2) *He says: I came*

from my city, I came down from my nome. I was one who said good things, I was one who repeated good things. I was one beloved (3) of his father and praised of his mother. I never took away the possessions of anybody (4) with violence. As to any people who shall take away any possessions from (5) <this> tomb, I shall be judged with them by the great god in the necropolis (6) when <they will be> in the West, their memory being evil in the necropolis. I am a virtuous spirit. (7) I know all magic which is advantageous (to me?) in the necropolis; I did all things which are advantageous to me.

1. 2. The beginning of this line, which is senseless as it stands, should be considered as an abbreviation of a fuller text given by Ḥerkhuf (SETHE, *Urk.*, I, 121, 11 ff.), who states in detail that he has come *to-day* from his town and his nome, has built a house, set up its doors, dug a lake and planted trees. Here we have clearly the enumeration of the essential features of a funerary establishment, *house standing for tomb*, and the meaning of the passage is evident: the speaker has just died (*came to-day from my town*) and finds waiting for him a well-appointed dwelling which he has prepared in the West. Thus the statement finds appropriately its place at the very beginning of the speech of the dead man. A variant, which changes the sense of *h·n·i m* slightly, is quite explicit (SETHE, *Urk.*, I, 150, 16 f.)  I went forth from my house, I descended into my tomb. Another inscription from Abydos (SETHE, *Urk.*, I, 150, 6 f.) and one at Dêr el-Gebrâwî (DAVIES, *Deir el Gebrawi*, II, Pl. xxi, tomb 38 A 2) show the same abbreviation of the passage as our inscription, and so does MARIETTE, *Mastabas*, 185; this shortened formula survives now and again into the Middle Kingdom (e.g. *Hieroglyphic texts from Eg. stelae etc. in the British Museum*, II, Pl. 14, no. 214, 3, 4). The second half of line 2 stands similarly as an abbreviation to represent a fuller statement. This is preserved by Ḥerkhuf (SETHE, *Urk.*, I, 122, 17-123, 2) and Pepinekht (*ibid.*, 132, 16 ff.), who give as reason for their abstaining from libellous or objectionable talk, that they wished that it would be well with them in the presence of the great god. On the identity of this *great god* see below.

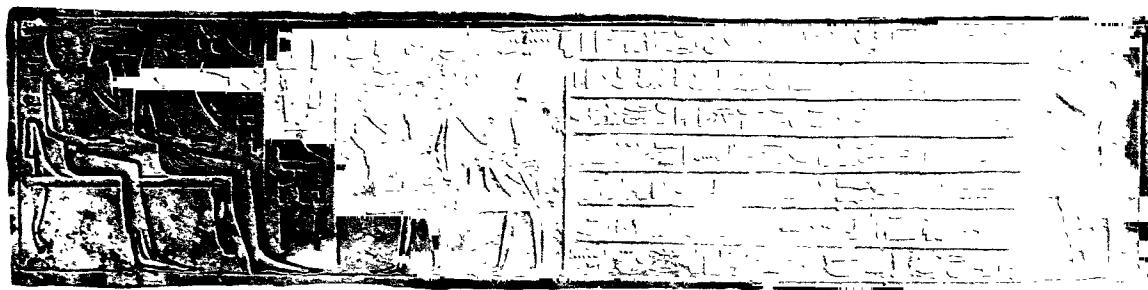
11. 3-5. The beginning of line 3 has numerous parallels; a difficulty arises, however, with the words  at the beginning of lines 4 and 5. I am inclined to take the beginning of line 5 as miswritten under influence of the word standing immediately above it; the condition that the word which should open line 5 ought then to be very similar in sound to the one which was erroneously put in its place is admirably fulfilled by , for the result would then be that we get an injunction against those who would do damage to the tomb: and such admonitions are exceedingly common in the inscriptions of the period, which use, just as our text does, the emphatic future of the *sdmtyfy*-form in this passage (SETHE, *Urk.*, I, 35, 1; 49, 1, 2, 8; 50, 16 f.; 58, 6, 7; 70, 12, 15; etc.). It may be said against this that the word *mçh·t* for *tomb* is not used in the Old Kingdom; but, as we have seen above, the style of the sculpture of our stone points similarly to the succeeding period in some of its peculiarities. In view of these arguments there seems to be little probability in the alternate view, *viz.* that *with violence* was meant to stand in both places, and that the sculptor merely doubled the preposition *m* in line 5 by mistake, under influence of the words above it. One would get good sense, though, on this assumption, namely, a general pronouncement of a moralistic nature: I have acted well, for "as to those who shall take away any possessions with violence, there will be" etc. Unfortunately such statements are very unusual in these texts. The explicit qualification *with violence* is even in line 4 unusual; generally the verb stands alone. SETHE (*Urk.*, I, 75, 15) gives .



1.



2.



3.

Stelae from Abydos

- 1. No. 6. *Scale* $\frac{1}{4}$
- 2. No. 24. *Scale* $\frac{1}{4}$
- 3. No. 23. *Scale* $\frac{1}{2}$

'*Iw wdr-(i)* in line 5 is also uncommon, the future of the *sdmtyfy*-form being generally carried on by *wnn-(i)* (*ibid.*, 35, 3; 49, 3, 11; 51, 1; 58, 10; 72, 5; 73, 5; HOLWERDA, *Beschreibung Aegypt. Samml. Leiden*, Atlas, I, Pl. vii; ROEDER, *Aegypt. Inschr. Berlin*, I, 42) or otherwise, in the texts most closely related with ours, by *iw-(i) r* (SETHE, *Urk.*, I, 117, 6; 122, 16; 150, 10; *Proc. Soc. Bibl. Arch.*, XIII, 122, c. 3; CAPART, *Chambre funéraire de la sixième dyn.*, Pl. iii).

1. 7. This is the greatest crux of the text, and unfortunately the parallels (SETHE, *Urk.*, I, 89, 17; 90, 1; 143, 2 f.; cf. 122, 13, and CAPART, *Rue de tombeaux*, Pls. 19, 20) are too different to help much. There need be little uncertainty about the first half, whether or not one wants to read *ih·n·i* for *ih·n·f*, which would have been written under influence of the *ink ih ikr* of l. 6, end. It is the latter half of the line which is confusing. I am inclined to see in it an *iw sdm·n·f* (in its exceptional reduplicating form), standing in parallelism with *iw + old perfective*, because the two members of this phrase are also parallel in meaning: I know all magic which is useful, and I have taken all measures useful to ensure a good hereafter. Professor Peet, on the other hand, would consider the possibility that the sentence was not complete, and that *irr ni* is a participle + dative: He who does for me everything which is useful to me (shall...).

A few remarks have to be made as to the writing. Strange is \leftarrow in the last word of line 4, and *sp* in line 3 is written with \ominus . The *n* of *hs·n·i* in line 2 and the *f* of *mut·f* in line 3 are transposed for graphic reasons, contrary to the usage in Herkhuf. The *š* is, both in the name of the woman and in *iš·t* in line 4, written with a sign which shows three groups of vertical lines, viz. in the middle and at the ends, and which resembles thus the mat on which the bread is put in the Old Kingdom form of ⊕ .

Lastly we have to consider the main peculiarity of our text, viz. the insistence with which the judgment in the hereafter is referred to. In all the parallel texts quoted above we find either a reference to a judgment *in the place of judgment*, or to a judgment *by the great god*. In neither case is there definite proof that a judgment in the hereafter is referred to at all, and Kees (*Totenglauben*, 49; cf. 33 f. and 154) may well be right when he suggests that these formulae applied originally to the king, by whose special favour the tombs were made and who could be trusted to vindicate the rights of their legal owners. But our inscription contrasts sharply with the others, and is even much more emphatic than the few texts which were known before and in which a somewhat similar tone prevails. (CAPART, *Chambre fun.*, Pl. iii; *Rue de tombeaux*, Pls. 19, 20). The term the *great god*, which up to the end of the Fourth Dynasty was a regular reference to the king, and may in religious texts well have persisted with the same meaning even after its change to *the good god* in the Fifth, in ordinary usage—this term is in our case qualified as *the great god in the necropolis*. The judgment will overtake the evildoers *when they are in the West*, and the essential danger to which they expose themselves is that *their memory will be evil in the necropolis*. Obviously a change in beliefs, which may have been developing for some time already, has here found full expression. The weakening royal power of the late Old Kingdom could not be relied upon to afford protection to those who needed it, and thus an all too human craving created the belief in a counterbalancing justice in the hereafter, or, at least, such beliefs, which may have existed vaguely and ineffectually, now came to the foreground. And it is no mere accident that our inscription, in which the new conviction has found such emphatic expression, lacks on the other hand the threat of personal vengeance which

certain nomarchs addressed to the would-be defilers of their tombs (SETHE, *Urk.*, I, 122, 15; 142, 17; also probably 90, 4). It was the lesser people who were left exposed by the disintegration of the central power, and if they did not despair in the pessimism of the "man who discourses with his soul," they had to find, as our mayor Shenay did, consolation in a strengthened belief in divine justice after death.

This stela is in the Museum at Cairo.

Middle Kingdom.

No. 19 (Pl. xxi, 3 and Fig. 1). Limestone, 0·31 by 0·19 m., very much damaged by salt. Underneath two uzat-eyes and a \ominus sign follow six lines of inscription. A man without wig, wearing the simple loincloth, a bead-necklace and an amulet, stands behind the offering-table. On the other side stands a woman whose name is lost, but who is called a *Royal Daughter*. The man is: *the Royal Son Dedtu, triumphant*. The inscription runs:

(1) *A boon which the king gives to Osiris, Chief of the Westerners, Lord of Abydos, that he may give invocation-offerings of bread and beer, of cattle and fowl,...*(2) *incense and oil, and all good pure things on which the god lives, (3) which heaven gives, and which the earth brings forth and which the Nile brings as his food offerings; (4) and the sweet north-wind of life [to the ka of] the hereditary [prince] and count who is great before the king of Upper Egypt (5) and grand before the king of Lower Egypt, a prince at the head of the people, the Chancellor of the king of Lower Egypt, The Royal Son Dedtu (6) [born of] the-priest-who-has-admission-to-Sebek, Sebekemheb, triumphant.*

It may well be that so poor a monument of a Royal Son and high official belongs already to the Second Intermediate Period, when a number of principalities existing side by side claimed each the royal prerogatives and titles for their ruling families. Other instances are known of people called *Royal Son* without their being of full royal descent, like our Dedtu. So, for instance, on the Cairo stela 20537, where the Royal Son is the son of a "count and overseer of the priests," and a "Royal Daughter," while the Royal Son of the Cairo stela 20304 seems to have sprung entirely from commoners.

This stela is in the University Museum, Manchester.

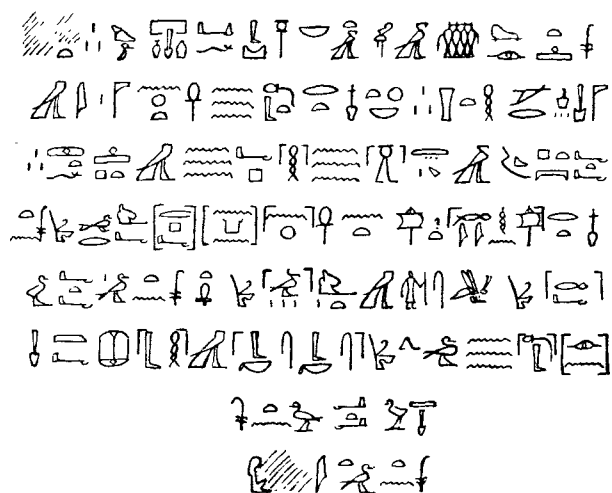
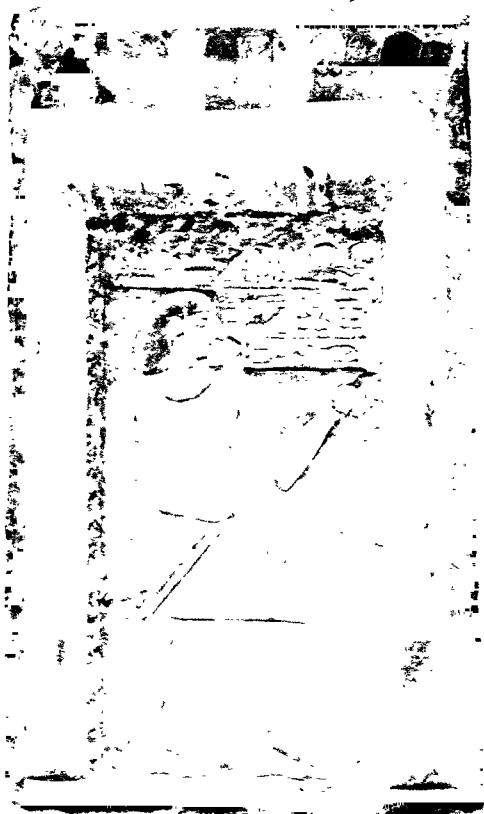


Fig. 1.



1.



2.



3.

Stelae from Abydos.

1. No. 25 Scale $\frac{1}{2}$

2. No. 14 Scale $\frac{1}{2}$

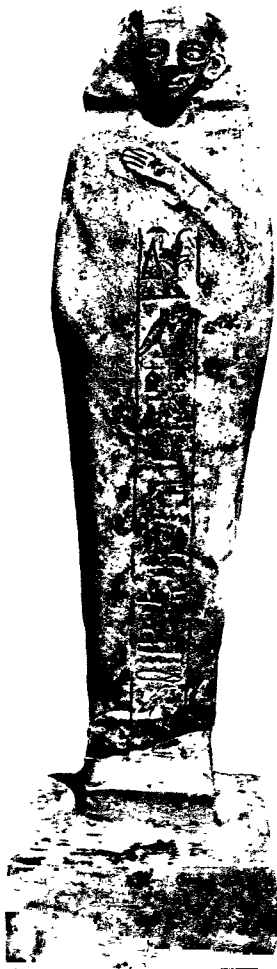
3. No. 19 Scale $\frac{1}{2}$



1.



2.



3.



4.

Statuette and Stelae, from Abydos.

1. No. 13. *Scale* $\frac{1}{2}$ 2. No. 12. *Scale* $\frac{1}{2}$
3. Statuette of Mentuhotpe. *Scale* $\frac{1}{2}$ 4. No. 4. *Scale* $\frac{1}{2}$

No. 25 (Pl. xxi, 1). Limestone, traces of red paint on faces, 0·49 by 0·46 m. The deceased, seated on a square seat, and his son who performs the sacrifice, are both clothed in the simple long loincloth of the Middle Kingdom, and wear a bead necklace, a "handkerchief" and no wig. The seated man has also a band which starts from the right hip and seems to pass over the back and the left shoulder but is not shown to rejoin the loincloth or its own beginning. Perhaps a sash is meant, if not clearly indicated. (Compare SCHAEFER-LANGE, *Grab- u. Denksteine d. Mittl. Reichs*, IV, Pl. xxxii.) The seated man is styled: *the venerated Overseer of Peasants Ameny, triumphant, born of Sitsneferu, triumphant*. The vertical column and the horizontal column over the offerings read: (1) *A boon which the King gives to the ka of the Overseer of Peasants Ameny, triumphant*, (2) *celebrated by his beloved son, the Overseer of Peasants Khakheperrē, the venerated one*. The main text reads:

(1) *A boon which the King gives to Geb, to Ptah who-is-on-the-South-of-his-wall, the Lord of 'Ankh Tawy, to Sokaris, to Osiris the Great God, Lord of the Shyt (?), to Osiris Lord of Abydos, (2) to Anubis who-is-on-his-mountain, who-is-in-Ut, the Lord of the necropolis, that they may give invocation-offerings of bread and beer, of cattle and fowl, of linen, of all vegetables and all gifts, (3) of food-offerings, of a thousand of all good pure things which the heaven gives and the earth brings forth, on which the god lives, to the ka of the (4) venerated Overseer of the Peasants Ameny, born of Sitsneferu, triumphant, and to the ka of everyone whose name is on this stela. (5) (Done) by his beloved son, who causes his name to live, the Overseer of the Peasants Khakheperrē, triumphant, born of Yeta, triumphant, the venerated one.*

The photograph does not do full justice to the exquisite *relief en creux*, while it shows well the fine spacing of inscriptions and figures. The purely decorative character of the work, with its rigid hieratic poses and the difference in proportion of main and secondary persons, shows that the so-called "naturalistic" indication of the folds in the body of fat men, started no doubt in an attempt to a more life-like rendering, has soon, in the Middle Kingdom, become mere convention in its turn. The symbol of Anubis at the beginning of the second line deserves notice.

This stela is now in the Ashmolean Museum, Oxford.

No. 4 a and b (Pl. xxii, 4). Limestone; the largest fragment is 0·46 by 0·30 m.; the smallest, with only the leg of the chair, 0·18 by 0·17 m. A man with a long wig, short false beard, holding a "handkerchief," is engraved rather than carved on the left half of the stone. We cannot say whether he was the main personage. The inscription is too damaged to yield any information, besides a few names: two women, *the mistress of the house, Hediry*, and *Wenta*; and *her son Rēpu*...

This stela is in the Chadwick Museum at Bolton.

No. 13 (Pl. xxii, 1). Flake of very hard limestone (0·09 by 0·10 m.), showing the names of a number of people. (Compare SCHAEFER-LANGE, *op. cit.*, No. 20374.) The first line gives the name of *the butler Herreshy, son of Theta*, while the other three lines enumerate *Sitkherti daughter of Sitrē*, and the two sons of Sitkherti, the *Treasurer Senmery* and *Senebu*.

No. 14 (Pl. xxi, 2). Limestone, 0·37 by 0·21 m. Flesh dark-red, hair and stick red; collar bright blue, signs blue; plastic border yellow, with black lines; stripes on cornice red, green and blue alternately. The man wears a long wig, short false beard, necklace, handkerchief, long walking-stick and short loincloth, which shows particularly well how

the projection in front results from a loose slip with the seam hanging down where it is tucked in in front of the body. Near this stela was found the statuette (Pl. xxii, 3) which shows the same inscription as the stela, except that the latter specifies Menthuhotpe's descent, *born of Uya, triumphant*, while the statuette specifies the granary:

A boon which the king gives, a thousand of bread and beer, of cattle and fowl, to the ka of the Overseer of the Granary of the God, Menthuhotpe, triumphant.

Though the figure is a rough piece of work its importance is nevertheless obvious. The inscription is that of an ordinary funerary statuette, but the fact that it is inscribed on the body instead of on back-pillar or base, and the general shape, hint already at the later *shabti*-figures, and thus it would be valuable if its place within the Middle Kingdom could be fixed with somewhat greater precision; but this seems hard to do. The general impression one gets from the style of the figure on the stela as well as the considerable height of the relief seems to connect with the Old Kingdom; a similar stela in Cairo (20014) contains the name Khentikhetihotpe, which points perhaps with somewhat more decisiveness to the beginning of the Middle Kingdom than the names on our objects; and I would be inclined to put these therefore provisionally in the beginning of the Middle Kingdom. The attire of the figure, whose left arm is advanced while the right arm is cleverly suggested underneath the cloth by the modelling, seems not to be considered an attire of the living by Bonnet, and indeed it resembles the mummy-shroud rather than the long mantle worn by old men in the Middle Kingdom, which leaves the arms or even a shoulder free (DAVIES, *El Bersheh*, I, Pl. vii; BLACKMAN, *Meir*, III, Pls. xviii, xxxv). The shroud is common enough with seated funerary statuettes in the Middle Kingdom, but rare with standing ones; an instance of the latter is Berlin 12485 (SCHAEFER-ANDRAE, *Kunst d. Alten Orients*, 276, Antef), where the feet however are free, in contrast with our statuette and with the later *shabti*-figures.

Stela and statuette are now in the Museum at San Diego, U.S.A.

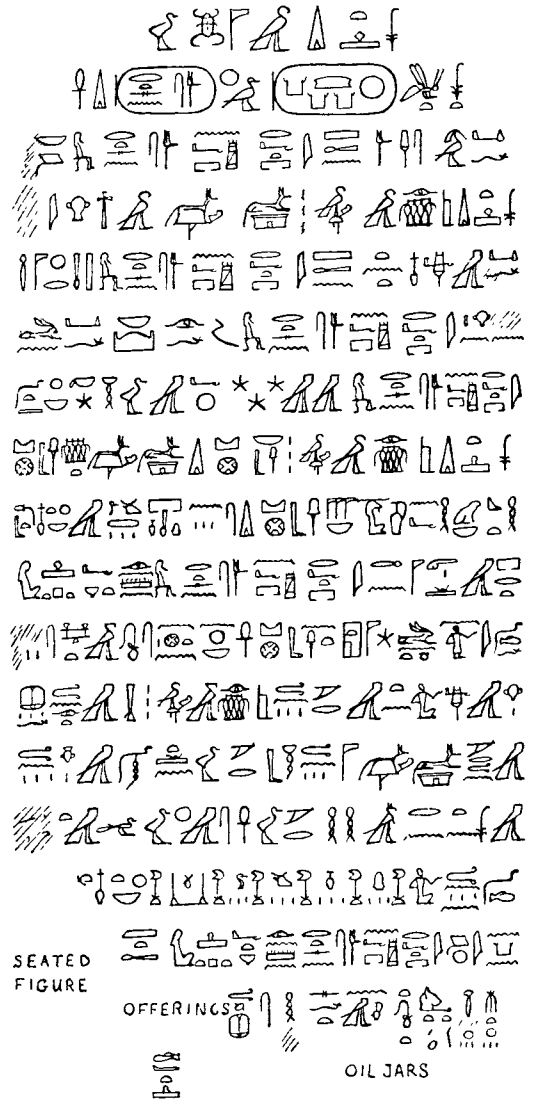


Fig. 2

No. 6 (Pl. xx, 1 and Fig. 2). Limestone, 1.00 by 0.50 m. This stela, dated to the reign of Sesostriis III, is very much damaged by salt, more so than Mr. Felton's admirable

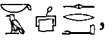
photograph would lead one to suspect. Both Dr. Gardiner and Mr. Gunn have suggested various readings, and the latter collated our copy most carefully when visiting us at Abydos.

At the left-hand bottom corner we see the deceased in front of his offerings, which are marked as such: *dbh·t*. Then are enumerated, from left to right: *šty-hb*, ointment; *hknw*, oil; *sft*, balsam; *nbnm*, oil; *twšw·t*, oil; first quality foreign oil; green eye-paint; black eye-paint. The main text is shown in Fig. 2.


(1) *A boon which the king gives, Horus Divine-of-Being, (2) the King of Upper and Lower Egypt, Khakaurēc, Son of Rēc Sesostris, given life; (3) May he give glory, power, force, triumph to the House-Official of the Palace Sesostris, the venerated one. (4) A boon which the king gives to Osiris, Chief of the Westerners, and to Anubis and to Wep-wawet and to Horus, Avenger of his Father; (5) May he give a beautiful Tomb of Triumph to the House-Official of the Palace Sesostris, the venerated one in the presence of the Great God; (6) May he "open the face" of the House-Official of the Palace Sesostris, so that he may see <in?> the sarcophagus; May he cause that (7) the House-Official of the Palace Sesostris be amongst the Circumpolar stars every day eternally. (8) A boon which the king gives to Osiris, Chief of the Westerners, (and which he) gives to Anubis and to Wep-wawet, Chief of Abydos, (9) and to Heht and Khnum, to all the gods of Abydos, that they may give invocation offerings of bread and beer, of cattle and fowl, of every good and pure thing (10) which goes forth in the presence of the Great God to the House-Official of the Palace Sesostris, born of the Nurse Hetept. (11) He says: O Priesthood of the temple of Abydos, and every citizen of this town who shall pass (12) by this my tomb; If you love Osiris the Chief of the Westerners and if you would repeat the celebration of his festivals. (13) If you love Anubis and Wep-wawet your gods, sweet of love, and you wish that your hearts be happy (14) in the king for ever, loving life and hating death, (15) then you shall say for me: a thousand of bread, a thousand of beer, a thousand of cattle, a thousand of geese, a thousand of linen, a thousand of every good thing (16) to the ka of the venerated House-Official of the Palace Sesostris, born of the Nurse Hetept, triumphant.*

Line 14 contains some deviations from the parallel texts preserved in three large stelae in Cairo, which are contemporary with our inscription. (SCHAEFER-LANGE, *Grab- und Denksteine d. Mittl. Reichs*, Nos. 20536 d, reign of Amenemmes III; 20538, reigns of Sesostris III and Amenemmes III; 20539, reign of Sesostris II.) All three show the harsh parallel, with substantives, of the *šdm·f*-form *ndm ib·tn*. Then however follow in all three cases two more *šdm·f*-forms: *sh·tn* (or *mrw·tn*) *cnh*, *smh·tn* (or *smhw·tn*) *mw*. Professor Peet suggests that the participles, which seem to be used in line (14) (for the absence of the reduplication in *mrw* in participles in this formula see, e.g., *Beni Hasan*, I, Pl. xxiv, A), are used vocatively, even though that implies a slight anacolouthon: "... (if ye love all these things) then, O ye who love life and hate death, say...."

No. 24 (Pl. xx, 2). Limestone, 0·56 by 0·39 m. The hieroglyphs are coloured light blue, and each line of script is surrounded, within the engraved rectangle, with a red line. Light green are the wigs of the two main personages, the spouted water-vessel, and its basin and the loaves on the offering-table; the latter are dotted with red. The pots, the geese and the joints of meat are red, and so is the right-hand bottom person. The whole is surrounded by a semi-circular plastic border at the top and the two sides. The drawing of figures and hieroglyphs is very clumsy. A seated man is seen stretching his hands towards the offering table. The text says: *A boon which the king gives to Ptah*

for the ka of Senebtef (or probably Senebtyfy), triumphant. Opposite stands an unnamed woman, smelling a flower. Below on the left is the deceased's mother squatting behind her offerings to the ka of the lady of the House Keseru, triumphant. For the strange and apparently foreign name compare SPIEGELBERG-PÖRTNER, *Aegypt. Grabst. aus süd-deutschen Samml.*, I, No. 31, p. 17, , with an additional s, and moreover from the New Kingdom. To the right one sees another woman squatting in front of her offerings; with her is a servant, with her hands in or on the top of a large pot, such as we see in baking- or brewing-scenes when the pots are cleaned out, or in the brewing-scenes when the thick fermenting liquid is filtered through a basket into the big pot underneath. It is probable that that scene is meant to be shown here. Other instances are known where the brewing is the only activity represented besides the offering to the dead. (BOESER, *Beschryving* etc., Leiden, Pl. ii. Also KLEBS, *Reliefs u. Malereien d. Mittl. Reichs*, 120 ff.) It is probable that the inscription in the frame belongs to the woman, and the loose one (to the ka of Ir...triumphant) to the servant. The woman seems to have the domestic title *iry·t ht*, and seeing that foreigners are so prominent on this stela one wonders whether her name means *she who speaks foreign languages*, as the New Kingdom has a corresponding word for "interpreter." The main text gives:

(1) *A boon which the king gives to Osiris, Lord of the Two Lands, living, the Great God, Lord of the necropolis, and to Anubis who (2) is on his mountain, who is in Ut, Lord of the necropolis, (3) that he may give invocation offerings of bread and beer, of cattle and of fowl, of linen, incense and oil, and food-offerings (4) to the ka of the washerman Senebtyfy, triumphant, born of Keseru, triumphant.*

The bird of  possesses three heads but only one pair of legs.—A work which falls so far short of the average standard of workmanship can hardly be assigned to one period rather than to another, within the scope of the Middle Kingdom.

This stela is now in the British Museum (No. 1653).

New Kingdom.

No. 12 (Pl. xxii, 2). Limestone, 0·16 by 0·10 m. This small stela shows Amūn's goose with the fan, and near it "Amen-Rēc." The two lines of inscription run:

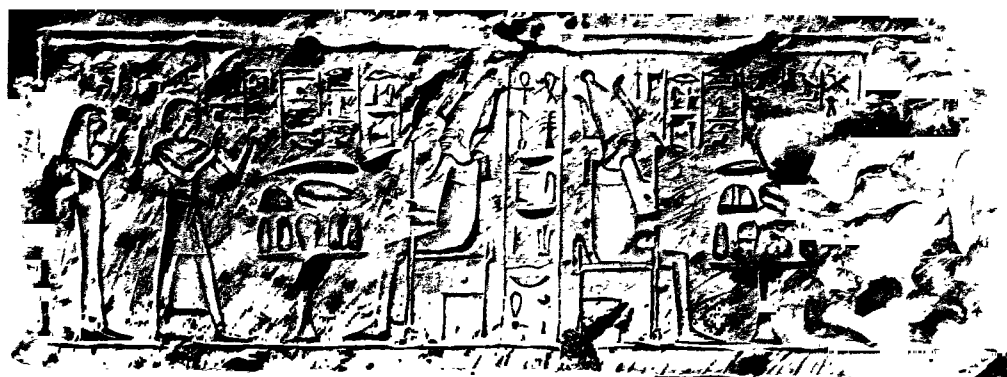
Made by the Overseer of the cattle of Nebpehtirēc Arābau.

It is interesting as a monument from the reign of Aahmes the Liberator. It was found in one of the tree-pits of the Cenotaph of Seti I, which had been dug out to some extent anciently, perhaps for the good black earth of its filling, and some objects of little use were thrown into it apparently by those who had been robbing graves in the necropolis and who passed there on their way back to the town. At least we found close by our little stela a group consisting of Predynastic and Nineteenth Dynasty pots—this as a warning to those who would conclude from the finding of this little stela that Seti I found an earlier building on the site. Now in the British Museum (No. 58520).

No. 7 (Pl. xxiii, 1). Limestone, 1·50 by 0·58 m., broken through the middle, and left top corner missing. The scene shows divinities enthroned round their offerings. Above the scene is the winged disk of Horus of Edfū, on both sides of which is written *He of Edfū*,



1.



2.



3.

Stelae from Abydos.

- 1. No. 7. Scale $\frac{1}{11}$
- 2. No. 2. Scale $\frac{1}{7}$
- 3. No. 13. Scale $\frac{1}{5}$

the great god, the Lord of Heaven, may he give life and health. On the extreme left is the falcon-headed god *Horus the son of Osiris, the great god, the Lord of Heaven who dwells in the Thinite nome.* He wears the double crown and holds, as the other gods, the ☩ and the ♂ sceptre. Facing him sits *Osiris, the great god, the Lord of the necropolis,* with the Atef-crown and flail, and wrapped in the mummy-shroud. Behind him sits *Isis the mother of the gods.* The right half of the stone repeats exactly the scheme of the left half, two gods facing one, but the combination of the two identical groups is so deftly done that we get the impression, not of repetition, but of pleasantly varying asymmetry, in which a group of three gods in the centre is flanked by a single figure on one side and a pair on the other, while the whole composition is nevertheless well balanced. On the right of the centre we see *Hathor, Mistress of the High House, dwelling in Abydos,* and opposite her *Anhert, ... dwelling in Abydos;* and finally the lion-headed goddess, *Mehyt, Mistress of Heaven, Mistress of the gods.* The line in the centre between the two goddesses says: *All protection of life to her, every day like R̄c̄.* The stone was probably part of the superstructure of the grave, and is now in the museum at Brooklyn, U.S.A.

No. 2 (Pl. xxiii, 2). Limestone, 0·30 by 0·11 m., right half damaged. On both sides one sees the adoration of Osiris. On the left it says: *Giving of praise to Osiris who nurses the Two Lands, the Lord of the necropolis, by the scribe's father [Amen]hotep, (and by) his mother, the Mistress of the House Ir-t-nefer-t.* On the other side a similar text was given, with the name of the scribe himself, but there is too little left to allow of a reconstruction of the name. In the middle is again a column with the usual blessing.

No. 13 (Pl. xxiii, 3). Limestone, figures daubed with yellow, 0·93 by 0·35 m. Adoration of "Osiris, Lord of Eternity," who is depicted with the Atef-crown and flail and crook behind a small altar bearing the Children of Horus—all anthropomorphic in this case. The adorer is *the Osiris, the Charioteer Amenmessu, triumphant,* but it is not he who has erected the stela. That was *Done by his father, who causes his name to live, the scribe Mahu, triumphant, in peace.* On the other side one sees the adoration of *Anubis who-is-in-Ut by the Osiris the scribe of the Treasury Mahu, triumphant,* and by his wife, the mother of Amenmessu, *his mother, the Mistress of the House, the Chantress of Amun, triumphant, in peace, mistress of veneration.*

This stela is in the British Museum (No. 1654).

Doorjambs from Tombs of the Nineteenth and later Dynasties.

No. 11 (Fig. 3). Sandstone, signs painted yellow; size of inscribed part 0·70 by 0·15 m. Found in fragments, giving the name of Ramesses II and funerary prayers to Bastet and Neith.

No. 16 (Fig. 4). Roughly cut stone, limestone, 0·65 by 0·11 m. *Osiris the Scribe of the Royal Documents, Thay, triumphant.*

No. 8 (Fig. 5). Limestone, two columns, 0·75 by 0·12 m. (1) *A boon which the King gives to Osiris Lord of Abydos, the great god, Ruler of Eternity, that he may give every good and pure thing to the ka of the Leader of the festivals of Osiris, the Royal Scribe Amenemheb.* (2) *A boon which the King gives to Horus the Avenger of his father, and to Isis the mother of the gods, Mistress of Heaven, that they may give good life with honour to the ka of the*

Royal Scribe, the Scribe of the Offering-table Amenemheb. This stela is now in the Museum of Sydney.

No. 10 (Fig. 6). Limestone, 0·90 by 0·08 m. *A boon which the king gives to Osiris, Chief of the Westerners, and to Horus the Avenger of his father, and to Isis the mother of the*



Fig. 3.

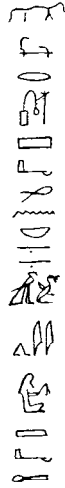


Fig. 4.



Fig. 5.

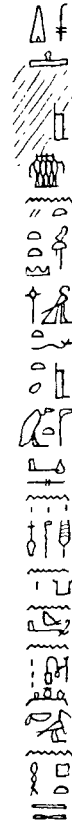


Fig. 6.



Fig. 7.

*gods, that they may give a good lifetime (with the determinative of the sacred serpent *chcw* instead of \odot) to the ka of the deputy of the scribe of the offering-table Bekenptah.*

No. 18 (Fig. 7). Limestone, 0·70 by 0·15 m., two columns, bottom part missing.
 (1) *Mayest thou revive, may thy soul go forth, mayest thou come and go in the necropolis, mayest thou not be repelled from the side of the great god in the Hall of the Two Truths....*
 (2) *Osiris the Imy-is, the ka-priest, the scribe of the Treasury, Osiris Horkhebt, triumphant; his mother the mistress of the House, Nebthetiit, daughter of Pathesemhor....*

No. 20 (Fig. 8). Part of lintel and one jamb of a doorway; limestone; extant height 0·90 m. On the lintel the bark of the sun is shown, carrying the beetle in the

disk and a human-shaped figure. Besides the bark are two persons. Over the door is the winged disk. The inner column gives: *A boon which the king gives to Osiris, the Lord of Eternity, the King of the gods, that he may give every sweet thing to the ka of*

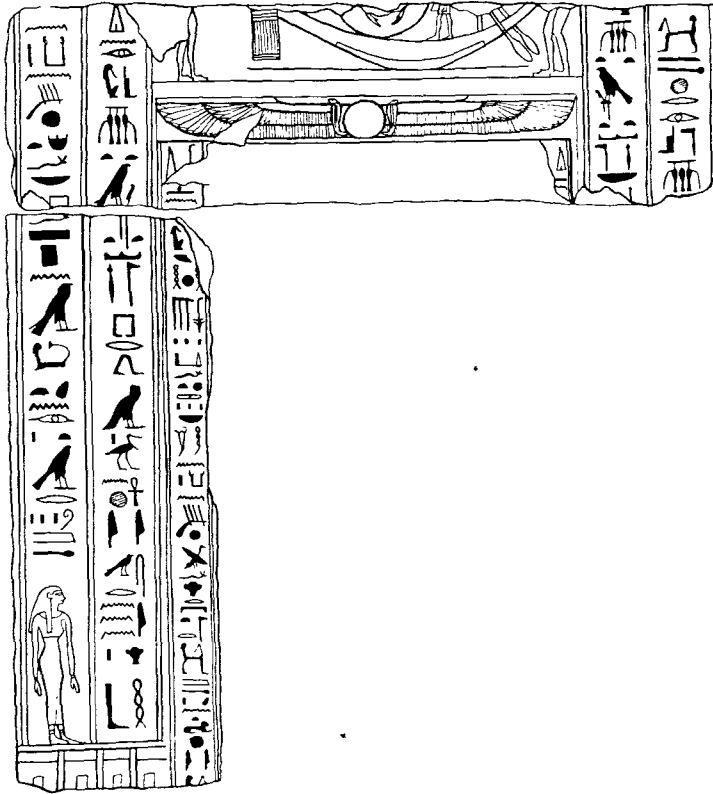


Fig. 8.

the venerated Pafherner, triumphant, born of Terekhy. The other two columns give a prayer that Osiris may grant to come forth as a living soul and to drink at the sources..... to the ka of his wife the mistress of his house Shepenhor, born of Irthorru, triumphant.

PTOLEMY II¹

BY W. W. TARN

I am speaking to-night of the second king of the line of the Ptolemies, who were the first Europeans to rule Egypt. Egypt had been included in Alexander's conquest of the Persian empire; after his death in 323 B.C. it fell to his friend and general Ptolemy Soter, and the dynasty Soter founded ruled the country for nearly three centuries, till the Roman conquest. I am taking Ptolemy Soter's son, Ptolemy II—commonly though quite inaccurately called Ptolemy Philadelphus—because his long reign, from 283 to 246, was the culminating point of Greek rule; though a Macedonian himself, his culture was Greek and most of the Europeans who supported him were Greeks, and during his reign this small minority of Europeans ruled Egypt like a conquered country and had to see what it could do with the vast mass of natives. Later on the natives began to reassert themselves, but with that we are not concerned to-night. I propose to say something first about Ptolemy himself and the power and glory of his kingdom, and then sketch briefly his administrative and economic system, the latter probably his own creation. This system is of interest, because it displays the most thorough-going scheme of State nationalization which up to 1917 had ever been put into practice by Europeans; some day it may be possible to compare Ptolemy's system with that which now obtains in Russia.

Our direct information about Ptolemy himself is slight; the few Greek anecdotes, on which is based the idea that he was a voluptuous dilettante, are rather futile, and the Jewish stories of his magnanimity and justice are no better; he had been a good friend to the Jews, and one of them in the Aristeas letter used his name for a fancy picture of the ideal king. His character has to be collected from his actions and his letters, and there we see a man with two distinct sides; on the one hand, a king ambitious and imperious, fond of power, of magnificence, of pleasure, generous with money, a patron of learning and literature, the first diplomat of his age—a fairly well-known type; on the other hand, a man with the mind of a modern captain of industry, ready for economic innovations on a great scale while capable of minute attention to small details. He had been highly educated; one of his tutors was the poet and lexicographer Philetas of Cos, friend and teacher of several notable literary men, like Theocritus and Callimachus; another tutor was Philetas' pupil Zenodotus, who became Librarian of the Library at

¹ This lecture, one of a series entitled "Great Personalities in Egyptian History," was delivered before this Society on March 7th, 1928, Mr. Bell kindly reading it in my absence through illness. A few references to recent publications, or bearing on points raised after the lecture, have been added, and a curious blunder, to which Dr. Rushton Parker kindly called my attention (I had twice written 33½ for 33⅓), has been corrected. The principal general works dealing with the subject are: A. BOUCHÉ-LECLERCQ, *Histoire des Lagides*, 1903-7; A. MITTEIS and U. WILCKEN, *Grundzüge und Chrestomathie der Papyruskunde*, I, 1912; W. SCHUBART, *Einführung in die Papyruskunde*, 1918; J. BELOCH, *Griechische Geschichte*, 2nd ed., IV, 1925; P. JOUGUET, *L'impérialisme macédonien et l'hellénisation de l'Orient*, 1926; EDWYN BEVAN, *A history of Egypt under the Ptolemaic dynasty*, 1927. See also, on Apollonius' estate, M. ROSTOVITZ, *A great estate in Egypt in the third century B.C.*, 1922.

Alexandria and was the first of the great textual critics who rendered Alexandrian philology famous. His third tutor was Straton, head of Aristotle's school at Athens, the last Greek to practise the study of physics. Education at the hands of these men obviously meant science and literature, and did *not* mean moral or metaphysical philosophy; Ptolemy's culture must have resembled that current in the Alexandria of his day, where literature and science were all-important and philosophy as such had no place. His ambition shows in his wars, his imperiousness in his letters and in many other ways; he put two of his brothers to death, which it could always be claimed prevented civil war and the consequent deaths of many quite harmless people. Many things illustrate his love of pleasure and magnificence: the pleasure fleet he kept on the Nile, his numerous mistresses, the dispossessed princes who lived at his court, the emphasis laid on the festivals he celebrated, the elaborate architecture of his festival pavilion, the huge warships he built, the great show at Alexandria when from dawn to dusk of a winter's day an endless procession of troops, play-actors, and slaves displayed to the people the symbols of his power and wealth. His patronage of brains must have been genuine, for the architect Sostratus, who built the lighthouse on the Pharos, once acted as his ambassador—a most successful one. Of love of science one cannot speak; the papyri vouch for his interest in scientific agriculture, but the literary tradition knows only of his zeal in collecting strange animals; beside many African and Indian birds, his zoological gardens contained leopards, panthers, lynxes, Indian and African buffaloes, wild asses from Syria, an Ethiopian python 45 feet long, a rhinoceros, a giraffe, and a polar bear¹, showing that some Arctic tribe he had never heard of had heard of *him*. And with it went a mind which calculated profits and percentages like any trader, but on a great scale; no operation was too big, no source of income too small to handle. Others may have helped him with the details of the economic system he created; but the main lines must be his own, for the simple reason that they are things which no one but the king could have dared to do. When one considers his long reign and manifold activities, one wonders whether the allusions to his weak health are not merely another Greek legend, invented to explain the fact that he was the only king of Macedonian blood who never took the field in person; he had no talent for war.

The type of his kingship had been settled by his father. The king was the State, absolutely and for all purposes; the checks, such as they were, imposed upon Macedonian kings by the old quasi-constitution of Macedonia did not exist for the Ptolemies; they were autocrats like the Pharaohs. The first Ptolemy, originally the satrap of Alexander's son, had subsequently claimed Egypt for himself as spear-won territory, which by Macedonian law passed to the king; and outside the three Greek cities, Naucratis, Alexandria, and Ptolemais, Ptolemy II owned every inch of the soil of Egypt, including the temple lands and the lands of the old feudal nobility, who had been abolished; others, by his good pleasure, might use and enjoy part of his soil and its fruits, but on his terms. The army and navy were his; he was the fount of law, and his rescripts had legal force; ministers and officials were merely his men, whom he made and unmade as he chose. Just one Macedonian trait survived in his kingship; every subject still had the right to present a petition to himself personally, and though many petitions got no further than

¹ Callixenus ap. Athen. v, 201 C (*cf.* 200 F); Diod. III, 36, 3 *sqq.*; P. Cairo Zen. 59075. Dr. Rushton Parker has reminded me that leopards and panthers are the same animal. But when Callixenus enumerates "14 leopards, 16 panthers," he means two different cats, whatever "panther" conceals—perhaps the ounce. The word, I believe, has often had local meanings, as in parts of America to-day, where "panther" means puma.

the district governors, some did reach the palace and were dealt with by the king¹. In the second century even this trait vanished, and petitions no longer reached the king himself.

As regards Ptolemy's position with regard to religion, a sharp distinction has to be drawn between Egyptians and Greeks. Ptolemy Soter had broken the power of the Egyptian priests, and though the priestly hierarchies carried on the temple services and the priests still met in their synods, the administration of the temples was supervised by secular officials appointed by the king, and the only function of the synods, beyond the regulation of purely religious matters, with which the Ptolemies did not interfere, seems to have been to decree honours for the king². Ptolemy II was thus head of the Egyptian religion; he subscribed liberally towards its worship, and built to Egyptian gods part of the temple at Philae and an expensive temple of red granite in the Delta; but we cannot say which of the first three Ptolemies it was who introduced into Syria the cult of the sacred animals of Egypt³. But Ptolemy was much more than head of the Egyptian religion; to Egyptians he was himself an Egyptian god, and in Egyptian documents bore the five names like any Pharaoh⁴. To the Greeks in Egypt this of course meant nothing; to them at his accession he was merely a man, even if some Greek cities were worshipping him. Certainly Ptolemy Soter, after he took the crown, had instituted a State worship of Alexander. But Alexander stood apart; and it was a great innovation when in 280 Ptolemy II instituted an official worship of his dead father as a god, and so established the principle that the king became a god after death. A few years later he took the last step; his sister and wife, that extraordinary woman Arsinoe II, who died in July 270, had already been worshipped before her death as the goddess Philadelphus, she who loves her brother, and after her death she and Ptolemy officially became the brother-and-sister gods, the counterpart on earth of Osiris and Isis for Egyptians, of Zeus and Hera for Greeks. Ptolemy had now established the final principle that the king was during his life officially the god of all his subjects, both Greek and Egyptian; after this each succeeding Ptolemy was officially a god during life, and each royal pair became incorporated in the State worship, with Alexander at their head. Ptolemy II was thus the real author of the Hellenistic State cults. Greek cities, anyhow at first, had usually worshipped a king because he had done something, something helpful to themselves; but the official State cult, as settled by Ptolemy and copied by other dynasties, was simply a political expression of divine right. Ptolemy Soter had been a usurper whose right was the right of the strongest and the ablest; Ptolemy II made that right the gift of heaven; the king now ruled, not because he was a conqueror, but because he was a god.

But even a divine autocrat needed human support. In theory, Ptolemy was all-powerful; in reality, he was strictly conditioned by the difficult fact that Egypt, a small country, was densely populated by its own native race, from time immemorial grouped in their villages and cultivating the soil. Ptolemy Soter had settled that the rule of the dynasty must be based on Greeks alone, including among Greeks people like Thracians and Anatolians, who readily became hellenized (the Macedonians were too few to count), and that there was no room in Egypt for Greek cities—he founded just one, Ptolemais

¹ P. COLLOMP, *Recherches sur la chancellerie et la diplomatie des Lagides*, 1926, ch. III.

² The latest discussion of the synods is by W. OTTO in *Sitzungsber. Bayer. Ak.*, 1926, Abh. 4.

³ W. SPIEGELBERG, *Beiträge zur Erklärung des neuen dreisprachigen Priesterdekretes zu Ehren des Ptolemaios Philopator*, 20-21. *Sitzungsber. Bayer. Ak.*, 1925, Abh. 4.

⁴ P. JOUGUET, *op. cit.*, 333.

in the Thebaid. Hence the attempt was made to create a Greek world without Greek cities. Greeks had flooded into Egypt, and the power of Ptolemy II rested on two things, a Greek mercenary army and a Greek bureaucracy. Under him no Egyptian bore arms, unless in the fleet; while the higher bureaucracy, roughly speaking, was Greek, and only the village and small officials natives. The Greeks who came to Egypt came for money or a career; at the end of the fourth century there was still a superfluous population in Greece, and the great number of exiles, and the popularity of mercenary service with its chances of enrichment, had accustomed many Greeks to do without city life. For mercenaries Egypt had great attractions. Theocritus speaks of Ptolemy's generosity as a paymaster, and a later story makes him raise the current rate of mercenaries' pay¹; but, if true, every other king must have done the same in self-defence, and the real attraction to mercenaries was that they received a holding of the best land in the world. Those who came were attached to the country by being attached to the soil; they were given a *cleros* or military allotment, the holders of a *cleros* being called cleruchs. What they got was the use of the land, with a moderate rent and the obligation to come up for service when called; the lot passed from father to son, but the property in the land remained in the king, and he could take it back; later on the lot became alienable by the holder. Most of the cultivated land, however, was already occupied, and the cleruchs were often given uncultivated or reclaimed land, which they brought into cultivation. To our ideas the holdings were small; an infantry soldier got 30 *arourae*, say 20 acres, about the size of a typical Highland croft; if one compares the farms of 160 acres given free by the Canadian Government, one sees once more that Greeks had much more modest ideas of a competence than we have, for ultimately the cleruchs formed a military aristocracy.

The Greeks settled in the country districts kept their own life as far as they could, and at this time rarely mixed or intermarried with natives, though that came later; they were foreigners camped in a strange land. They brought their own gods, read their own poets, set up their own gymnasia for their sons' education, and formed endless clubs like the Greeks at home. As they were debarred from city life, they grouped themselves in the quasi-autonomous corporations called *politeumata*, which imitated the forms of city life as far as possible; the Greeks settled in the Delta formed one such group, those in the Fayyûm another, and so on; the mercenaries similarly grouped themselves, at first on a national basis, like the *politeuma* of the Cretans or the Boeotians. A good deal is known about the life of the up-country Greeks from their letters. Education was not run by the State, about the only thing in Egypt which was not, though some Greek cities of Asia Minor were turning to State education; secondary education was largely occupied with subjects which would be useful to a good bureaucrat; and the women had more freedom than one expected. It was a material sort of life; and one need not look there for ideals.

Ptolemy at his accession already possessed a considerable empire; in Syria he ruled Palestine, most of Phoenicia, and Coele-Syria, that is the Lebanon district, though it is doubtful if he ever held Damascus; in Africa the Cyrenaica, which was governed by his half-brother Magas, possibly as chief magistrate for life² of the great city of Cyrene; over-seas, Cyprus and perhaps the Lycian coast; also he enjoyed unquestioned command of the sea and control of the Cyclades. His foreign policy largely consisted of warfare

¹ Aristeas, ed. WENDLAND, 36.

² This should follow from the constitution of Cyrene of 321 (or 322): S. FERRI, *Alcune iscrizioni di Cirene*, 1926, no. 1.

with the other two Macedonian kingdoms, that is, Macedonia itself and the Seleucid empire, which was his neighbour in Syria and Asia Minor and embraced much of Asia. I am not going to trouble you with the complicated story of the so-called Syrian wars between Egypt and the Seleucids, but one point in the first Syrian war is of importance. It is now known that Ptolemy was the original aggressor¹; he first deprived the Seleucid king Antiochus I of Miletus, and then in 276 invaded Seleucid Syria; but he was defeated and driven out, and Antiochus besieged Miletus, secured the help of Magas of Cyrene, and was expected in turn to invade Egypt. It is these events which probably supply the answer to that controverted question, why did Ptolemy marry his full sister Arsinoe, widow of king Lysimachus of Thrace? The marriage of a full brother and sister was as repugnant to Greeks as to ourselves; and though it was common enough among Egyptians, Ptolemy's marriage had nothing whatever to do with Egyptian custom; the Greeks were ruling the Egyptians as a conquered race, hewers of wood and drawers of water, and Ptolemy was the last man in the world to go out of his way to adopt a native custom. But the evidence now points to this marriage having taken place in the winter of 276-275, that is, in the full tide of Antiochus' success; and the reason was probably political. Arsinoe was about the ablest person living, and Ptolemy needed her brains and will-power to win the war he was fast losing himself; while she desired and obtained scope for her extraordinary talents, for she became, not merely queen, but virtually ruler. She did win the war, and a very brilliant feat it must have been; at the peace Egypt not only retained all her previous possessions but acquired the whole coast of Asia Minor from the Calycadnus in Cilicia round to Miletus. Had Arsinoe lived, she might have extended the empire further; but she died, and after her death Ptolemy's wars were uniformly unsuccessful; he lost the command of the sea and the Cyclades to Macedonia, much of the coast of Asia to the Seleucids, and also lost control of the Cyrenaica. It speaks well for his real ability in any field except war that before he died he had largely retrieved the position by diplomacy. It does not appear that these perpetual wars damaged Egypt herself much, but they helped to prevent Greek civilization establishing itself more firmly in Asia than it did.

Why Ptolemy sought to extend his empire has been much debated: was it an offensive measure, or was it defensive, a means for the security of Egypt? There is something to be said for the latter view: Syria did act as a buffer for Egypt, and Syria and Cyprus were economically necessary, for Egypt produced no timber and no metals except gold, and the timber of Cyprus and the Lebanon was vital to her for shipbuilding, as was the copper of Cyprus for the copper coinage which alone appealed to the native Egyptians. But these places were already Ptolemy's at his accession; his subsequent conquests in Asia Minor and his attempts to control the Aegean cannot be classed as defensive measures; and now we know that he was the original aggressor, it seems certain that his empire was an end in itself. The question, however, may be open whether he was urged by dynastic ambition or by trade interests. The oriental and Indian trade was an important factor, and the great overland routes of the third century came to the sea in Phoenicia and Ionia, primarily at Tyre and Ephesus; but Ptolemy held unchallenged possession of Tyre, and also got the chief benefit of that section of the Indian trade which came by sea to South Arabia; and though probably trade considerations did enter into his wars, I should myself attribute them primarily to ambition, Ptolemy's desire to rule and profit from as large an empire as possible. For every fresh place he acquired

¹ The Antiochus Chronicle: S. SMITH, *Babylonian Historical Texts*, 1924. See the present writer in *J.H.S.*, XLVI (1926), 155.

was a source of profit; it was heavily taxed, and he would have been much amused at the modern idea that, if you administer a country, the money raised from it must be spent upon it. I must pass over his administration of his subject provinces, merely saying that his interferences with the autonomy of his Greek cities went far beyond those of other dynasties, and that he made some attempt to subject them to the Egyptian financial administration.

His foreign relations extended beyond the Hellenistic kingdoms. In 273 he sent an embassy to Rome, probably on trade matters; and he sent an envoy, Dionysius, to the Mauryan emperor Vindusāra in India, to obtain Indian trainers for his African elephants, just as a few years ago the Belgians at Api on the Congo imported Indian trainers for *their* elephants; Indian Buddhists have been traced in Egypt in the third century, and I believe a gravestone with the Buddhist wheel of life has been found at Alexandria¹. There may have been a difficulty in sending Dionysius to India across Seleucid territory, and possibly Ptolemy engaged an Arab captain to take him by sea, just as Ptolemy Soter when similarly blocked had once engaged an Arab sheikh and his camels to take an express messenger to Babylon across the desert. Ptolemy's actual relations with the Arab world are obscure. In 273 he took measures to protect Heroopolis near the Gulf of Suez against some Arabs, whether local tribes or from across the water. He sent an officer named Ariston² with orders to explore the Arabian coast as far as the Indian Ocean; Ariston coasted round the Sinai peninsula to the gulf of Akaba, but how far south he got beyond this is unknown; and Ptolemy sent a military expedition to some place across the Red Sea, which visited other unidentified places in Arabia. Diodorus relates³ that, when Egyptian traders began to frequent the gulf of Akaba, the Nabataeans of Petra, jealous for their trade, fitted out ships and plundered them until driven from the sea by an Egyptian squadron; it is difficult not to connect this with Ptolemy's expedition, but if, like the first Antigonos, he really dreamt of dominating Petra and the head of the great caravan route from the incense-land of South Arabia, he certainly failed. But on the African side of the Red Sea he initiated a movement which had large consequences. Driven by the desire to obtain elephants for war, he began a systematic exploration of the coast, and his officers founded towns and trading posts southward from Arsinoe, the modern Suez, to Ptolemais of the Elephant hunts, near Suâkim; his successors steadily continued the work till their officers had reached the incense district of Somaliland and the "Horn of the South," Cape Guardafui; finally this led to direct voyages from Egypt to Southern India. Ptolemy's elephants when caught were shipped to Berenice, opposite Assuan, in great elephant-transport, and thence taken to Coptos over a well-equipped road which he made, and so down the Nile to Memphis. Beside the African elephant he introduced the camel into Egypt; camels are often mentioned⁴, and later a camel post ran from the south to Alexandria. He cleaned out and restored the old canal connecting the Nile with the Red Sea by the Bitter Lakes, though later it was allowed to silt up again. The best thing he did was to set Greek engineers to drain Lake Moeris, thus recovering a large extent of valuable land, now the Fayyûm, which became a centre of Greek settlement. Whether he carried out drainage works in the Delta is unknown.

¹ W. FLINDERS PETRIE in *J.R.A.S.*, 1898, 875.

² Now known from papyri: P. Cairo Zen. 59247.

³ Diod. III, 43, 5.

⁴ Camels under Ptolemy II: P. Cairo Zen. 59143, 59207; P.S.I. VI, 562; Athen. v, 200 F. Cf. *B.G.U.*, VI, 1351.

The Egypt of Ptolemy II held the same place in the eyes of the rest of the world as contemporaries assigned to the France of Louis XIV. Theocritus boasted that Ptolemy ruled 13,333 cities, perhaps a rounding out of some real census of villages and hamlets throughout the Empire; and Callimachus prophesied that Ptolemy would rule the world from the rising to the setting sun, the rule which the gods of Egypt had been wont to promise to the Pharaohs. A few perhaps divined that Egypt was not quite so strong as she looked¹; but how it appeared to the common man is shown by the description given, half in burlesque, by Herondas. "Egypt is the very home of the goddess; for all that exists and is produced in the world is in Egypt; wealth, wrestling-grounds, might, peace, renown, shows, philosophers, money, young men, the domain of the Brother and Sister gods, the king a good one, the Museum, wine, all good things one can desire²."

That was Egypt; and to the world generally the most important thing about Egypt was its capital Alexandria. I need not describe the city to you in detail, as Mr. Bell did that in a very excellent lecture last year³. We must figure a city of brick and stucco, not of stone, enclosed by a vast wall some ten miles round—the greatest city wall known except that of Syracuse—but which soon overflowed the wall on both sides; a city with a great motley population, of which the Greek citizens, so-called, who had some form of quasi-autonomous organization, constituted little more than the nucleus; a city of a new type, a royal capital, where the royal quarter occupied literally a quarter of the space, where the real authority was not the Greek magistrates but the king's governor, and to whose constitution we cannot apply considerations drawn from the Greek city-state. It was fed by a royal official, the eutheniarch, that is, the ultimate food authority of the city was Ptolemy himself, just as the Attalid kings were the ultimate health authorities of Pergamum; and just as its food authority was a god, so its water supply too was divine, for the canal which supplied it was called Agathodaimon, the name of the good Genius of the city, the local earth-god who in the form of a serpent had been there long before Alexander; only gods could supply such a city. Alexandria's wealth and magnificence were based on its great trade; but while some cities at this time were growing great on their manufactures, and others on transit trade, Alexandria was the only city (except perhaps Tyre) to do both on a great scale; and in both branches she probably led the world. She was not part of Egypt, but was known as "Alexandria beside Egypt"; Greeks called her simply "the city," while Egypt was "the country," *χωρά*, the name a Greek city gave to the territory it ruled, as though Egypt were Alexandria's territory. But we possess a document in which some enthusiast goes far beyond this⁴; Alexandria, he claims, is not only "the city" but the world, for the whole earth is her territory, her city-land, and all other cities are only her villages, or as we might say her boroughs.

And in matters of the intellect this claim was not so very absurd, if we omit art, and the philosophies of Athens. For great art Alexandria did little or nothing; she concentrated on the smaller arts and domestic adornment. The expense of imported marble led to her inventing incrustation, the panelling of rooms with marble veneer; the crowded houses led to the walls of a room being painted as gardens or colonnades, so that you seemed to be in an open hall. Alexandria invented cameo-cutting and mosaic paving, and specialized in gem engraving and goldsmith's work; but for what was done we are too often thrown back on literary descriptions, like that of the golden

¹ Antigonus Gonatas in Plut. *Arat.* 15.

² I, l. 26 (Headlam's translation).

³ Published in this *Journal*, XIII (1927), 171.

⁴ Berlin Pap. 13045, ll. 25 *sqq.*, in *B.G.U.*, VII, 1923.

table which Ptolemy II had made, encircled with golden plants whose leaves quivered in the breeze as though alive. But of most of the world's intellectual interests—literature, learning, and science—Alexandria became the centre; and if the literature was rather like ours to-day, a varied output of interesting and respectable work of the second class, science too rather resembled our own, for it was to constitute the one outburst of true scientific achievement which ever took place prior to quite modern times.

These intellectual interests had been cared for by Ptolemy Soter, himself no mean historian; it was he who founded the Library (the idea may go back to Babylon) and also the Museum, where an association of learned men worked in peace, freed by him from all worldly cares; and under him many men of repute came to Alexandria, like Demetrius of Phalerum from Athens, who perhaps gave him the idea of the Museum, Euclid the geometrician, and Herophilus, the great physician who discovered the nerves and the circulation of the blood¹. Ptolemy II had only to follow his father. It was well on in his reign before the books in the Library were sorted and arranged; tradition speaks of 200,000 rolls in this reign, 700,000 ultimately; he also founded the daughter library in the Serapeum, perhaps for duplicates. His tutor Zenodotus was the first Librarian, and arranged the books; Callimachus, who was never Librarian, made the catalogue, a vast work with biographies of the authors. Callimachus, with his polished and uninspired verses, was the arbiter of literary taste; but the great glory of the reign was that Theocritus was in Alexandria during the golden years when Arsinoe was queen. Towards the end of the reign, Apollonius of Perge, the second name in Greek mathematics, may have begun to work there, and also the greatest of Greek geographers, Eratosthenes, whose measurement of the circumference of the earth was only 200 miles out; but both really belong later. The story that Ptolemy encouraged the Jews to translate their Scriptures into Greek—the Septuagint version—is legend; but the translation of the Pentateuch *was* made in the third century. We know many names of those who at this time worked at Alexandria—poets, grammarians, physicians, literary men; it was the age of the specialist, who spoke, not to one city, but to the world, and whatever the world did was reflected there, except one thing: philosophy was not for Alexandria. But in the whole list there are only two important writers who were Alexandrians. One was Cleitarchus, who wrote that imaginative history of Alexander which exercised such influence and has given modern historians such trouble; the other was Apollonius, afterwards called the Rhodian, who succeeded Zenodotus as Librarian and wrote an epic we still have, the *Argonautica*, remarkable as containing the only serious attempt ever made by any Greek to portray a girl honestly in love—extraordinarily well done, too. A group of Ptolemy's officers wrote their reports on the exploration of the Red Sea coast, and associated with them was Dalion, the first Greek to go right up the Nile to Khartum; the reports of these officers and their successors form the basis of one of the most interesting of Greek books, Agatharcides' description of the strange tribes of savages they discovered. Lastly, the astronomer Aristarchus of Samos was working in Alexandria. He discovered that the sun was much larger than the earth, and proceeded to guess that the earth went round the sun in a circle. His idea ought to have been epoch-making; but naturally the great mathematicians who followed him could not make the sun as centre of a circle agree with observations, and merely rejected his guess. If Archimedes or Hipparchus had had the patience, as they

¹ What he actually discovered was that the arteries carried blood, not air, and pulsed from the heart. Some say this was equivalent to discovering the circulation of the blood, while others draw a distinction; but it is hard to see where the distinction comes in.

had the ability, to work that guess out and discover elliptical orbits, the history of human thought might have been very different.

On Egyptians all this activity had no effect at all. Egyptians had no share in the intellectual activities of Alexandria, and these had nothing to do with Egypt. Ptolemy Soter had thought for a moment that there might be some participation; the Egyptian calendar was translated¹, and the Egyptian priest Manetho wrote a history of Egypt for Greeks; but though Manetho dedicated his work to Ptolemy II, in this reign all interest in native Egypt was dropped, and a little later Alexandria appears as merely an object of hatred to many Egyptians². But we possess a curious story of the effect which Alexandrian civilization produced upon one native at this time, an Ethiopian named Ergamenes, king of Meroe. The priests of Ethiopia had an old custom that, when they thought the king had reigned long enough, they gave him notice that the gods now desired him to die; and he died. Apparently they gave Ergamenes notice. But he had learnt how educated Greeks regarded such matters; his answer was to seize the temple, execute the priests, and live happily ever afterwards.

I must now turn to the Ptolemaic system in Egypt itself, though every description must be very imperfect, for all the threads, both administrative and economic, ran to Alexandria, and of the central offices in Alexandria nothing is known; we only know certain country districts. I need not give a list of all the officials who formed the bureaucracy; the rough outline is this. On the administrative side, the native nomarchs, who had governed the divisions of Egypt called nomes, had by the reign of Ptolemy II lost all importance, and the nomes were governed by Greek generals; their functions were chiefly civil, but their names remained a sign of conquest. At the head of the whole was the *dioecetes* or finance minister, who was nominally the head of the economic side; no trace remains in this reign of any minister at the head of the administrative side, such as is found in other kingdoms. The finance minister had a subordinate in each nome, the *economus*, with smaller local officials again under him, appointed by the finance minister; this side looked after the taxes and Ptolemy's trade interests. There was a mass of small officials of every type, from the village authorities upwards. It has been pointed out how rarely the word *ἀδικία*, injustice, occurs in complaints about officials³; the king's bureaucracy could do no wrong. I suppose that in fact every bureaucracy requires constant and drastic supervision. This one may have worked pretty well under the strong Ptolemy II; but judging from what is known of affairs in Syria—the bribery and intriguing that went on over getting the taxes to farm, and the way some officials traded for themselves instead of minding their business—the officials in Egypt can hardly have been immaculate; the Greeks who emigrated to Egypt were possibly not the best of the race, as may be surmised from the fact that any well-known Greek who came later at once received high office. A little later one hears of much delay and red tape; and in the second century the bureaucracy broke down in a mass of abuses, till Ptolemy Euergetes II reformed it sufficiently to enable it to last another century and serve as model for the bureaucracy of the Roman Empire.

The absence of a minister for affairs, who should have been head of the administrative side, and the powers and duties of the finance minister, illustrate the unique position occupied by the revenue in the affections of Ptolemy II. His finance minister Apollonius was almost a regent; he uses the royal "we" and gives orders in language proper to a

¹ The calendar of Sais, Hibeh P. I, 27.

² Its destruction is prophesied in the "Potter's Oracle."

³ COLLOMP, *op. cit.*, 91.

king¹; the hierodules at Bubastis say "The king has released us from liturgies and so has Apollonius²." Beside supervising all the economic officials and his own great estate, Apollonius engaged in such diverse activities as putting pressure on the government of a subject Greek city³ and preparing the galleys which took Ptolemy's daughter to Phoenicia for her wedding⁴; he did some trading on his own account, and was also quite capable of influencing the course of justice. There were judges for the Greek population called *chrematistae*, who went circuit; but a recent papyrus has revealed a *chrematistes* acting in effect as Apollonius' agent and taking his orders⁵; even where Greeks were concerned the revenue was put above the law, a horrifying idea. It was even put above the interests of the very Greeks on whom Ptolemy's power rested; for no subject who came into conflict with the Treasury was allowed to employ a professional advocate. We possess a letter to Apollonius, written by Ptolemy himself and not by a secretary, which bears on this matter and is so illuminating that I will read it. "King Ptolemy to Apollonius, greeting. Since certain of the advocates hereinafter mentioned are taking up Revenue cases to the injury of the revenues, see that those who have been advocates are made to pay to the Crown twice the amount of the damage, increased by one tenth, and forbid them to be advocates in any case whatever. If any of those who are injuring the revenues are in future convicted of having acted as advocate in any case, send him to us under arrest and confiscate his property to the Crown⁶." When humble persons who presented petitions to the king, or romance writers of a later day, praise Ptolemy for his justice, it is not a bad thing to turn back to his own letters.

I come to the economic system itself. Its basis was the land, which belonged to Ptolemy; and one of its objects was to get the land cultivated to the best advantage. Of part of the land Ptolemy granted the use to others; but a large part—perhaps in the Delta and the Fayyûm the larger part—was in his own hand, and cultivated for him by the native peasantry; this was called king's land, and the cultivators were the king's people, the royal peasants. Of the four classes of land granted out, the temple lands were now cultivated by the king like king's land, he allotting to the temple what produce it actually required; the grants to the military settlers, the cleruchs, have already been described; and the third class, the so-called private land, which received much extension later, at present really only meant houses and gardens. The fourth class was the great estates "in gift," as it was called. Ptolemy would make a revocable grant to some high official of a tract of land, and he had to develop it. A great deal is known about one such estate in the Fayyûm, of over 6000 acres, including the village of Philadelphia, which he granted to Apollonius. Thanks to the discovery of much of the correspondence of Apollonius' steward Zeno, the fortunes of this estate and the draining, building and planting that went on can be followed rather closely; Apollonius, except that he has no legal jurisdiction, is a little king there, with his own court and army of officials; but how closely Ptolemy himself kept in touch with his kingdom is shown by his once ordering Apollonius to try a certain crop⁷.

Just as the whole land of Egypt was Ptolemy's, but he granted to others the right to do certain things with it, so we may say, in a sense, that the whole of the business carried on in Egypt, whether agriculture or trade, was his also, and that the rights of

¹ P. Hal. I, l. 260.

² P.S.I. IV, 440.

³ P. Edgar 54 (*Ann. Serv.*, XX, 1920, 32); cf. P. Cairo Zen. 59037, and see U. WILCKEN, *Archiv*, VII, 75.

⁴ P. Cairo Zen. 59242.

⁵ *Ib.* 59202, 59203.

⁶ P. Amherst, II, 33 (Grenfell and Hunt's translation).

⁷ P. Cairo Zen. 59155.

others in the matter were only such as he granted or permitted. Speaking roughly, this took three main lines. There were businesses which Ptolemy, that is the State, kept entirely in his own hands for himself; that is the famous monopoly system. There were businesses in which he had a share, that is, he took part of the profits but allowed his subjects to have the rest. And there were businesses in which he took no share of the profits but in respect of which he received a fixed annual amount, whether part of the produce or as payment for a licence to carry on the business; that is, in effect, he sold to his subjects the right to do business. Such things as free trading or free work were apparently unknown in his Egypt outside the three Greek cities; retail traders were probably little but State agents for distribution, and you paid the State for the privilege of earning your living. Of course we all pay taxes; but in Egypt also they paid plenty of taxes; what I am speaking of goes a good deal beyond taxation. The three Greek cities were probably exceptions; just as they owned their own land, so perhaps they had free retail trade; while at Alexandria the association of export merchants may have had certain rights and a certain freedom, for one does not see how export could be worked otherwise. But everything else was State controlled. As it happens, one sees the three systems—a fixed payment to the State, a share of profits to the State, and a State monopoly—at work in the three chief food staples, corn, wine and oil; and we may look at these first to see what Ptolemy was doing.

All corn land, in whatsoever hand, rendered to the king part of the corn produced; but as regards the king's land a startling innovation had been made in the matter of the king's share. It had been immemorial custom in Egypt and Asia that the king took a tenth of the harvest. This meant that he was a true partner with his peasantry, for what he took was a fraction, and therefore in a bad year he shared the loss. Ptolemy shared no losses; from each royal peasant he took a fixed amount of corn, and nothing belonged to the peasant till he had taken out the king's share, transported it to his village barn, had it weighed, and got a receipt from the proper officials. It was a tremendous breach with ancient custom, and very lucrative. The king's corn was taken from the village barn to the nome barn, and thence down the Nile to the King's Barn in Alexandria, ready for export. Ptolemy was the greatest of all corn-merchants; and he reserved also the right to buy at his own price all surplus corn offered for sale.

The natives grew corn; but the Greeks largely grew vines; the cleruchs could make their land vineyards if they liked, and they often did, for vines gave roughly five times the profit of wheat off the same acreage¹. There was an old tax, the *apomoira*, of one-sixth of the produce on vineyards for the benefit of the temples, which Ptolemy diverted to maintain the cult of his deified wife Arsinoe Philadelphus; some think this meant that part went to his Treasury, but in any case it relieved Greek growers from maintaining the native religion. Ptolemy's own tax on wine produced was 33½ per cent., based on a three years average; and he had a duty of the same amount per cent. on foreign wines imported, which protected his wine business. But the point is that here, unlike corn, he took a fraction; that is, he was a partner with the Greek wine grower and shared losses, but was not a partner with the Egyptian wheat grower—an instructive instance of racial discrimination.

Oil introduces Ptolemy's greatest innovation, the monopoly system. The idea may have come to him from the temple monopolies of ancient Egypt, and possibly other kingdoms occasionally copied; it is difficult not to suppose that, in some way or other,

¹ A. JARDÉ, *Les céréales dans l'antiquité grecque*, I, 1925, 187.

pitch was a royal monopoly in Macedonia and parchment in Pergamum. But the monopoly system, as we know it, belongs to the Ptolemies and was probably originated by Ptolemy II. Monopolies were very profitable, as the figures for papyrus show. In Greece, a roll of papyrus in 333 cost over a drachma; in 296, with Egypt open to trade, a drachma bought several rolls; from 279, after Ptolemy II had established the papyrus monopoly, a roll cost nearly 2 drachmae¹; perhaps Ptolemy used a differentiation in the price of paper to attract writers to Alexandria. As to oil; olive trees were scarce in Egypt, except much later in the Fayyûm, and throve badly, and the olive was chiefly used as a fruit; the oil of the country was vegetable oil, of five kinds, sesame, croton, linseed, safflower, and colocynth (that is gourd seeds). For the bulk of people oil was the staple fat food, butter and margarine being unknown. Each year Ptolemy ordered what and how much land should be sown with oil-producing plants, and the whole crop had to be sold to him at his own price; the oil was made in his own factories, the workers being semi-serfs like the royal peasants. It was then sold through retailers, who were really State agents for distribution, as the sale price was fixed; we possess an excited letter from an official who heard of a retailer in his district trying to make something for himself out of it. Ptolemy's profits ranged from 70 per cent. on sesame oil to over 300 per cent. on colocynth.

Naturally with such a business he had to exclude Greek olive oil, which would have driven his oils out of the field; and the import duty was meant to be, and was, prohibitive. Perhaps you will pardon me if I give the figures² for the year 259, which prove this; they really are interesting. Ptolemy sold his oil that year, all five sorts, at 52 Ptolemaic drachmae the *metretes*; foreign oil was subject to an import duty of 50 per cent. and had to be sold to himself at 46 Ptolemaic drachmae. That is, the shipper of Greek oil paid 26 Ptolemaic drachmae duty, and another 2 drachmae for harbour and other dues, and sold at 46; this gave him 18 Ptolemaic drachmae, or say 15 Attic drachmae, to cover the original cost of the oil, the 2 per cent. export duty of the port of shipment, the cost of the voyage, and his own profit. Now at this time the price of free oil on Delos, retail, ran from 17 to 22 Attic drachmae; call it 18. Retailers on Delos usually made 20 to 30 per cent. profit; call it 25 per cent. This makes the cost price of olive oil on Delos 13½ Attic drachmae as a low average; and 13½ from 15 means that the shipper to Alexandria had just 1½ drachmae left to pay export duty, cost of the voyage, and his profit. I cannot estimate the cost of the voyage; but supposing it cost nothing, his profit would still be little over 10 per cent., which was quite inadequate for sea risks, as is shown by maritime loans commanding two or even three times the usual rate of interest. Consequently no one would ship Greek oil to Alexandria as a venture; if a wealthy Greek wanted olive oil, and was ready to pay, he probably had to get it in for himself, as Apollonius did. Ptolemy provided for this also; if that Greek took the oil up the Nile for his own use he paid another 12 per cent., and if he tried to sell it it was confiscated and he was fined 100 drachmae the *metretes*. I suppose no such cast-iron monopoly in the way of State trading has ever been seen. But of course there was smuggling.

¹ See G. GLOTZ in *Journal des Savants*, 1913, 28.

² The oil figures specifically for 259 are from P. Cairo Zen. 59015, the rest from the Revenue Papyrus. Prices at Delos c. 260 (the nearest): *I.G.* xi, ii, 219 A, ll. 8, 40 (20 and 22 dr.); *ib.* 235, l. 10 (20 dr.); *ib.* 240, l. 2 (17 dr.); see the table in GLOTZ, *op. cit.*, 21. I have taken a very low average, 18 dr., as prices were tending to fall; probably 20 dr. would be nearer the mark.

Several other monopolies are known beside oil and papyrus; mines, quarries, salt and natron works, fulling and dyeing cloth, and probably banking. Weaving cloth and linen was a qualified monopoly. All spices entering Egypt had to be delivered to Ptolemy at his own price, and were worked up into ointments and perfumes in his own factories. As to businesses in which he owned a share and took part of the profits, it is known that, beside wine-growing, he had a 25 per cent. share in all fisheries and all honey (which took the place of sugar), with a 25 per cent. duty on imports to protect his interests; if a man went fishing for pleasure, an agent followed him to register his catch; he had no chance of telling fish stories. Other businesses are known which could only be carried on by purchasing a licence from the Treasury; it is thought this may have applied to all businesses not monopolized. Ptolemy also owned many cattle, pigs and geese, and merchant vessels on the Nile. I can give one instance of his personal keenness as a trader. Early in his reign, in Greece and the Aegean, ivory meant Indian ivory, coming through Seleucid territory; it cost 8 drachmae the mina at Delos. Somewhere between 269 and 250 Ptolemy threw enough African ivory on the market to break the price, which fell to $3\frac{1}{2}$ drachmae¹—a very modern manœuvre. Whether he subsequently reaped the harvest he expected is unfortunately not known.

In addition to what Ptolemy made by trading, taxation was very heavy; the money taxes went as the corn went, through the village and nome banks to the central bank in Alexandria. There was a succession duty on estates, 5 per cent. on house rents, 10 per cent. on sales, $33\frac{1}{3}$ per cent. on dove-cots; taxes on cattle and slaves; octroi duties for goods entering the towns, or passing from Upper to Lower Egypt; import and export duties, some very heavy, at the sea harbours, and a 2 per cent. import and export duty at the Nile harbours; taxes for a gold crown at the king's accession, taxes to maintain the fleet and the lighthouse, and many taxes for local objects. The taxes were farmed out, but in Egypt (not in the subject provinces) tax farmers were so closely supervised that they were really almost State agents for collection—a very good thing—and men had to be induced to undertake the work by a commission of 5 per cent. on the money collected, a figure which had to be increased later. But care was taken that they did collect the taxes, and that the tax-payer paid. One can get some idea of what this taxation meant from Telmessus in Lycia², which Ptolemy III presented to a protégé of his: it had been damaged by war, and the new ruler remitted the Ptolemaic taxes on various products of the soil and re-imposed instead the old Asiatic one-tenth, for which relief the city heartily thanked him. Egypt was of course regarded as far the richest state in the world, but Ptolemy's annual income is unknown. A late writer gives it as 14,800 talents a year³, say £3,500,000; but the figure is worth little, and it is not even known if it applies to Egypt alone or the whole Empire.

Naturally Ptolemy needed full statistics, and everything was registered and inspected. Censuses were regularly taken. Every village had its detailed land register, from which were compiled the nome registers and from them the central register in Alexandria. Houses were probably registered. All working animals were registered, and at seed time and harvest the State distributed them to the best advantage. The native population was registered and paid a poll tax, which Greeks did not; and every native had his "own place," which he could not leave without official order or sanction, one of the bases of the whole system.

¹ *I.G.* xi, ii, 163, l. 7; 203 A, l. 71; 287 A, l. 118.

³ Jerome on Daniel xi, 5.

² *O.G.I.S.*, 55.

And this brings me to the last matter, the native Egyptians. The peasants were not full serfs, bought and sold with the land; for one thing, no land was bought or sold in this reign. But both the royal peasants and the monopoly workers were quasi-serfs, tied to their own place unless shifted by official order; the royal peasants could be turned out of their farms at any time, could have their animals requisitioned, and could be compelled to cultivate extra ground if it fell vacant. The natives in fact were subject to many forms of compulsion; they had to furnish men and animals for the postal service, and supplies for the king and his retinue if he moved about the country; troops on the march were billeted upon them; they filled the various village offices, which were regarded as burdensome, and if there were not enough volunteers men were compelled to serve. They had to give compulsory labour on the dykes and canals, but this was traditional, for it was life and death to everybody; the conscription for the fleet and the elephant hunts, though unpopular, might be justified by the safety of the State. The trouble was, it was not *their* State; the Greek motto of "The State before the individual" was being applied to people who had no voice in the matter, and the State, instead of being the sum of the individuals composing it, was just one man. They were accustomed to despotic rule, but the rulers had been of their own race, and an oriental despotism generally leaves loopholes for evasion; now there were no loopholes, and they were taxed as never before; the abolition of the old tenth of the harvest must have been bitterly resented—imagine some state to-day monopolising margarine and making 300 per cent. profit. The workers in the oil-factories got a share of profits, amounting to about 4 per cent., and it may ultimately turn out that this was a bright spot in the system; but at present one cannot say more than this, because too little is known about the question of wages. The wages actually recorded seem absurdly low, even on the wretched Greek scale; but corn was very cheap too, and as yet no proper study of the relation of wages to prices has been made. One sees Ptolemy's attitude in the provisions for the military settlers. Land he gave them himself; but houses were assigned them in the villages, in the shape of buildings taken from the natives, one of the worst burdens in Egypt. But when some soldiers seized houses for themselves, he writes peremptorily to his governor "See this doesn't happen again," and tells him to make them build barracks, or anyhow to assign them what buildings are necessary himself¹. That is, the natives may be deprived of their buildings, but injustice shall be done decently and in order. Ptolemy of course had no desire to be oppressive; he was careful not to interfere either with the native worship or social customs, such as the freedom of the women with regard to marriage and divorce; and he retained for Egyptians their native judges, called Laocritae. What he did desire was to be efficient, to get the utmost value out of the country; but there is no doubt it was felt as oppression. One sees that in the numerous strikes of all sorts of workers; not strikes for better conditions, for there were none to be got, but the outcome of mere despair, when the men ran away to some temple with the right of asylum, and the worried officials had to coax them back as best they could. A revolt in the Delta broke out in the next reign, and the moment the Egyptians recovered their national consciousness at the battle of Raphia there began, just 30 years after the death of Ptolemy II, the great series of native revolts which were thenceforth a standing danger for over a century.

Egypt was Ptolemy's estate, which he farmed, and farmed very efficiently. No doubt he was not aiming at making money, but at constructing a strong state, though

¹ P. Hal. 1, ll. 166 *sqq.*

since it became known three years ago that, contrary to previous belief, he was the aggressor in the first of the Syrian wars the "strong state" theory has assumed a rather different aspect. He could claim that he improved the land of Egypt, brought waste land under the plough, introduced new seeds, new fruit trees, new breeds of sheep and pigs; he could claim that he spent much money worthily, on promoting literature, science, exploration, even if much went in luxury; he could claim that he provided careers and competences for many Greeks, and that men were literally dazzled by the splendour and resources of his kingdom. Certainly he gave prosperity to his Greek followers; but there is no evidence that that prosperity extended to the natives. We do not know of anything done for *them*; no education was attempted, no public health measures (and the laws of Pergamum show that Greeks knew something about public health); they got nothing in his reign from Greek culture, and on them was thrown the whole loss of a bad crop. Some books will tell you that Ptolemy was the father of his people, ready to carry out the behests of philosophy. Putting aside romances like the Aristeas letter, there is no evidence at all for this, beyond an occasional exhortation to officials to behave properly. It is doubtful, as we saw, whether Ptolemy was educated in moral philosophy at all. Probably, like every king, he read philosophic treatises on how kingdoms should be governed; but we all read many things that we do not act upon, and there is always that third century Stoic fragment¹ which condemns some king—the writer certainly meant the reigning Ptolemy—who treated his people's goods as his own. We need not compare Ptolemy's practice with modern practice in the matter or even with the precepts of Greek philosophy; for he fell much below his neighbours, the Seleucid kings, who, though they had the same mass of natives to deal with as he had, imposed lighter taxes, progressively diminished the area of serfdom, gave many natives the chance of Greek culture, and, as they never amassed a treasure, must have put the residue of the money they raised back into the country. The condemnation of Ptolemy and his successors is, that the wealth they raised was in no sense used for the benefit of the people who made it; even the residue did not go back into the country, but went to form the great Treasure of the Ptolemies. Perhaps a century hence, if it be true that by then the dominant question on this earth will be the pressure of its population upon the food supply, someone in my place may be praising Ptolemy II as one of the greatest of men, because he did increase the amount of food in the world, and his methods will no longer much matter. But in looking at his reign to-day, while recognizing what he did, we cannot omit from consideration the way in which it was done.

¹ Suidas, βασιλεία 2.



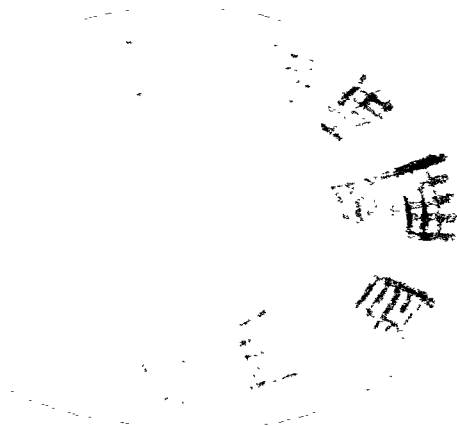
1.



2.



3.



4.

Predynastic white-on-red ware.

- | | |
|-------------------------------------------|-----------------------------------------------------|
| 1. B.M. 58199. <i>Scale</i> $\frac{1}{4}$ | 2. B.M. 53882. <i>Scale</i> <i>v.</i> $\frac{1}{4}$ |
| 3. B.M. 58200. <i>Scale</i> $\frac{1}{3}$ | 4. B.M. 58192. <i>Scale</i> <i>v.</i> $\frac{1}{3}$ |

SOME PREHISTORIC VASES IN THE BRITISH MUSEUM AND REMARKS ON EGYPTIAN PREHISTORY

By ALEXANDER SCHARFF

With Plates xxiv—xxviii.

First of all I must take the opportunity of thanking Dr. Hall most sincerely for his permission to publish in this *Journal* some prehistoric vases recently acquired by the British Museum. During my stay in London in the summer of 1927 I was able to make accurate notes of the pieces themselves, which have been admirably supplemented by the excellent series of photographs and sketches shown here, for which I have likewise to thank Dr. Hall and also Mr. Glanville. This publication offers me furthermore the desired opportunity to submit to the circle of readers of the *Journal* some thoughts on Egyptian prehistory.

A. Vases with white designs on polished red ground (Cross-lined Ware).

1. B.M. 58199. Pl. xxiv, 1. Bought in 1926. Ht. 20 cm., diam. above 7.5 cm., below 5.7 cm. Slender pot with flat bottom, slightly bellied in the lower part, and somewhat flared at the rim; for the shape *cf.* PETRIE, *Prehist. Eg.*, xv, 58 and xvii. The polish covers only the outside surface and the inside of the rim. The design shows in thin white strokes a zig-zag pattern divided into groups by perpendicular lines; the designs of PETRIE, *Corpus*, xiv, 46 and xv, 58 are allied, but do not cover the whole surface.

2. B.M. 58200. Pl. xxiv, 3. Bought in 1926. Ht. 7 cm., diam. above 10.3 cm., below 5.8 cm. Broad pot with flat bottom and projecting rim. Polish only outside and on the inside of the rim; the design is a similar zig-zag pattern to No. 1. The painting has faded very much in places. The pot of PETRIE, *Prehist. Eg.*, xi, 14 is to some extent allied in shape and design.

3. B.M. 53882. Pl. xxiv, 2. Acquired in 1914. Ht. 8 cm., diam. above 15 cm., below 8.3 cm. Pot of similar shape to No. 2, but still broader. Only the outside surface (except the base) and the inside of the rim are polished. The design shows three hippopotami, separated from each other by groups of W-shaped lines. On the inside of the rim are painted groups of five short strokes. Two of the hippopotami face the right, and the third the left. The cross-hatching on the bodies is different in the case of all three animals (Fig. 1). Note the different treatment of the hippopotamus in PETRIE, *Prehist. Eg.*, xviii, 71, 72.

4. B.M. 57523. Pl. xxv, 1. Presented by the British School of Archaeology, from its excavations at *Ḳau el-Kebîr* in 1924, marked 1743. Ht. 3 cm., diam. above 7.5 cm., below 4 cm. Red polished bowl with flat bottom, painted inside with thick yellow strokes. The artistic design is formed of stepped rectangles reaching from the rim to

the middle. The spaces between the rectangles at the rim are filled in with dots; the middle is occupied by a circle filled with dots. Cf. the design in PETRIE, *Prehist. Eg.*, x, 5.


5. B.M. 58192. Pl. xxiv, 4. Bought in 1926. Ht. 4.5 cm., diams. 12 and 17 cm. Elliptical red polished bowl with rounded bottom; the rim is chipped. On the inside are ten disconnected cross-barred designs painted in thick white strokes. For the shape cf. PETRIE, *Prehist. Eg.*, x, 5, for the painting cf. *Zeitschr. f. äg. Spr.*, LXI, Pl. i, 4 (Berlin No. 22389).

6. B.M. 58197. Pl. xxv, 2. Bought in 1926. Ht. 3 cm., diam. above 11 cm., below 5.7 cm. Low, exceptionally thick-walled bowl of irregular shape with flat bottom; it is polished outside and in, and decorated only on the inside of the rim with a white triangular pattern five times repeated. Cf. a somewhat similar vase, PETRIE, *Prehist. Eg.*, x, 11.

7. B.M. 53881. Pl. xxvi. Bought in 1914. Ht. 40.5 cm., diam. above 8.8 cm., below 6 cm. A vase unusually tall for this ware, with flat bottom; the shape is slender, slightly bellied, and somewhat flared at the rim. Only the outside surface and the inside of the rim are polished. The yellowish-white design of this pot is quite unique for this ware; an endeavour will be made below to give an explanation of this. We see two of the



Fig. 1.

designs generally described as pot-plants or palm-trees; between them two rather long fish-bone patterns: above, two galleys each with two cabins and in the prow a broad curved object ending in a pair of horns, and a standard of well-known type behind the after cabin. The boats are alike except for the two streamers which hang down from the standard of one boat only. The boats are surrounded by short wavy lines, whose ends, unlike those of the hieroglyph , are turned up. For parallels to these representations we must look to the red-on-buff ("Decorated") pots; there we find them similarly combined, e.g., PETRIE, *Prehist. Eg.*, XIX, 41 N. For the standards cf., e.g., the same plate, 41 J.

B. Black-topped red polished pots (B-Ware).

8. B.M. 58207. Pl. xxv, 3. Bought in 1926. Ht. 7 cm., diam. above 8.7 cm., below 7.8 cm. Small pot with strikingly broad base, and a somewhat chipped rim, 1.4 cm. thick. The inside is completely blacked, and the outside, too, comparatively far downwards. Two small holes in the bottom. Was it intentionally made useless ("killed")? Cf. the black-polished pots, PETRIE, *Corpus*, XIX, 96 a-c.

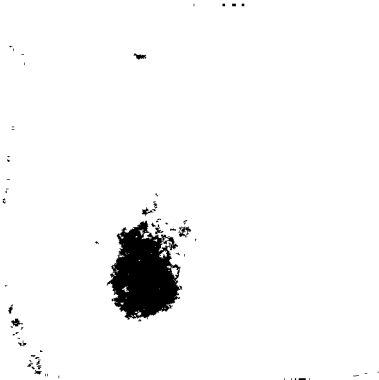
9. B.M. 57933. Pl. xxv, 5. Bought in 1925. Ht. 14 cm., diam. above 8.8 cm., below 8.5 cm. Pot with broad base and funnel-like neck without special accentuation of the



1



2



3



53885



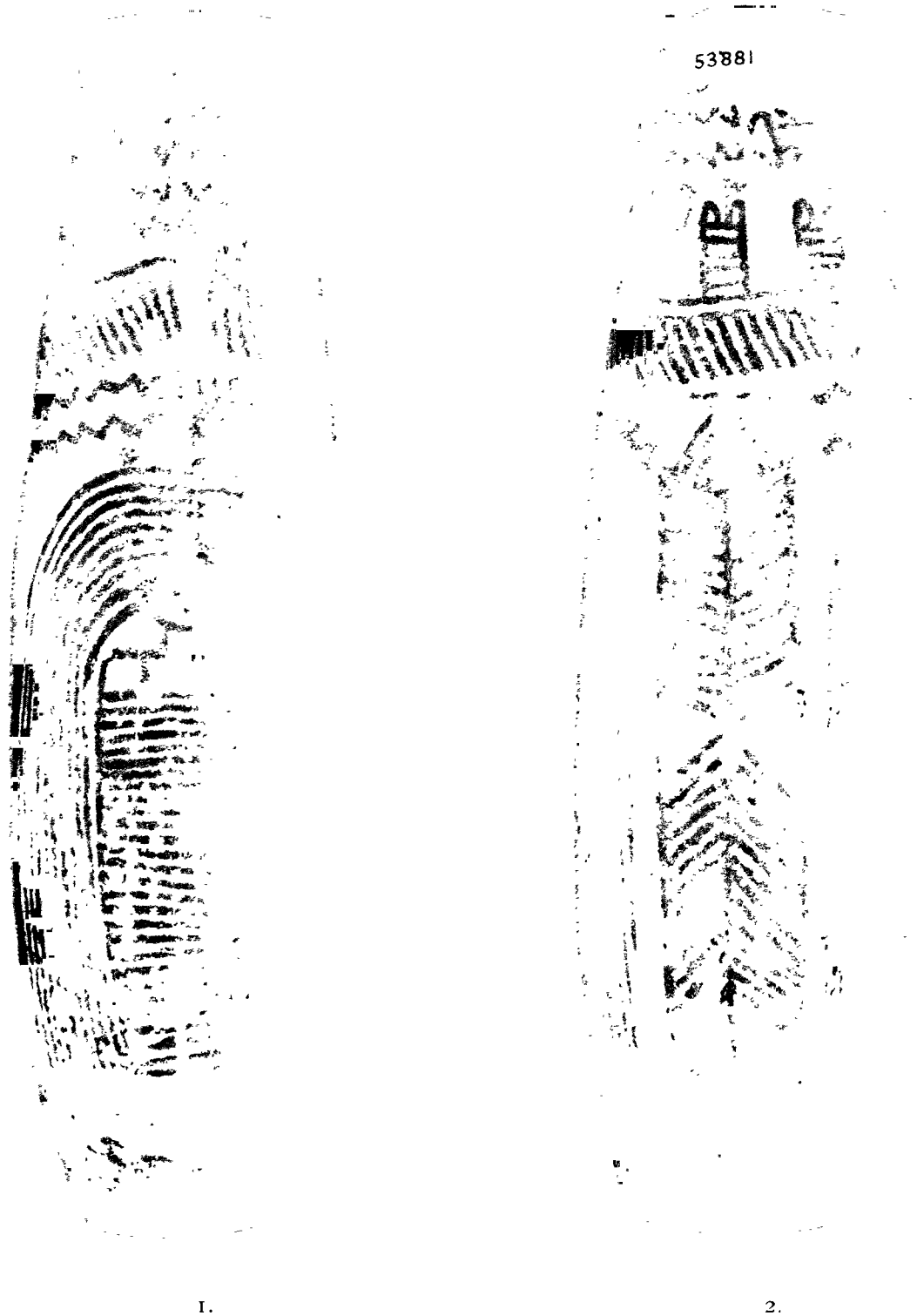
4



5

Predynastic Pottery.

1. B.M. 57523. *Scale $\frac{1}{2}$*
2. B.M. 58197. *Scale c. $\frac{1}{3}$*
3. B.M. 58207. *Scale c. $\frac{1}{4}$*
4. B.M. 53885. *Scale $\frac{1}{4}$*
5. B.M. 57933. *Scale c. $\frac{1}{10}$*



1, 2. Predynastic white-on-red vase. British Museum 53881. *Scale* $\frac{3}{16}$

rim. The inside is black only at the rim and is not polished. Outside the blackening reaches in one place down to the root of the neck. The shape seems to be new.

10. B.M. 53885. Pl. xxv, 4. Acquired in 1914. Ht. 12·5 cm., diam. above 7·6 cm., below 3 cm. Beaker-shaped pot, polished red outside, the rim being blackened both outside and in to a depth of 1 cm. only; inside unpolished. On the outside is modelled in relief a lizard which seems to be crawling in an upward direction from left to right; it is clearly the animal represented by the hieroglyph 𓆎 . As a parallel may be instanced a white on red vase in Cairo (*Cat. gén.* 18804 = VON BISSING, *Tongefässe*, 23 and Pl. vii) in which the outside is decorated by four crocodiles in relief. The black-topped pot of PETRIE, *Diospolis*, Pl. xiv, F 66 of S.D. 34 must also be taken into account here, if indeed the serpent (?) shown on it in the drawing is really in relief.

The most interesting of the group of pots published here is incontestably No. 7, shown in Pl. xxvi, which reproduces in the white-on-red technique ("Cross-line") of the First Civilization the design and style of the red-on-buff ("Decorated") ware of the Second. One feels clearly that the author of this design has attempted something new, which he has, however, not achieved with the same freedom as the old accustomed work. Thus the standards and prow-ornament are executed with great care, but there is lacking entirely the dash which these things are accustomed to have in the true red-on-buff pots; furthermore the water lines have an unusual form differing very much from that customary in the red-on-buff pots. Moreover in these latter the comparative size of the things represented is usually inverted: the ships are larger than the so-called pot-plants; here on the contrary in our white-on-red pot the plant design takes up more than half the room. This pot, which in shape and technique undoubtedly belongs to the First Civilization and yet bears designs which are only customary in pots of the Second Civilization, is a strong proof of the existence side by side of the two cultures in Egypt over a certain length of time.

An inverted and rather less striking example is, I believe, to be seen in the pot from Grave 454 shown in PETRIE, *Naqada*, LXVII, 14¹ (Fig. 2). On the whole it renders

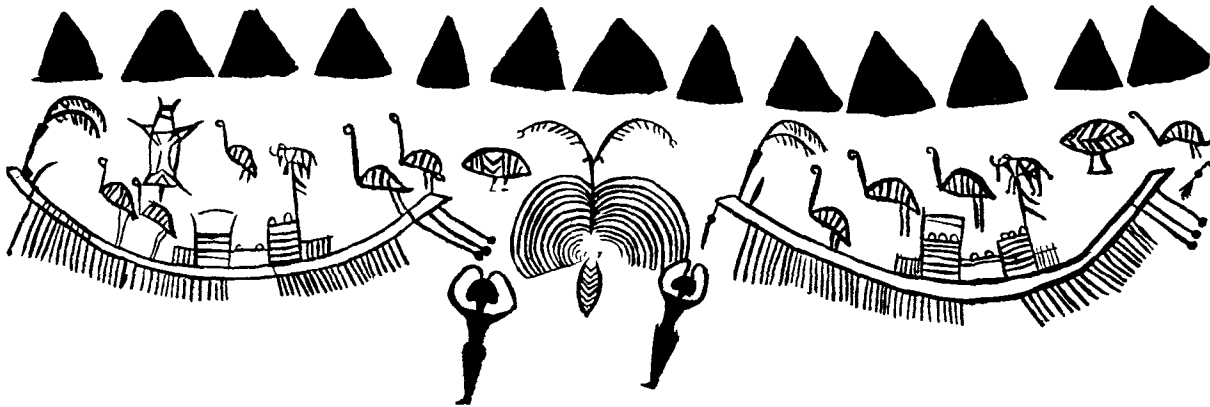


Fig. 2

(After PETRIE, *Naqada and Ballas*, Pl. lxvi, 4.)

¹ The bowl shown in PETRIE, *Corpus*, xxxvi, 72, dated S.D. 32, which at first sight offers a perfect parallel and which, given as it there is as belonging to the red-on-buff, would serve as an example of the stylistic transition from white painting to the red technique, is according to *Prehist. Eg.*, 21 "incised," and has consequently nothing to do with red-on-buff ware.

the designs of ships customary in this kind of ware; certain details, however, appear strange. Thus it is the only red-on-buff pot known to me with elephants on the standards; the elephants, birds and fishes (?) represented on and over the ships are only given in outline with a few lines of shading, exactly as was customary with the white designs of the First Civilization, whilst in the red designs on the other hand the bodies of animals and men are executed entirely in block colour (*cf.* the two women on the same pot). Moreover the cabins, contrary to the rule, are increased in size by additions, and at the stern are placed large steering-oars which resemble those of the ships on a white-on-red pot¹ (Fig. 3). Thus the ships of these pots differ essentially from their fellows, giving the impression that a vase painter who was accustomed to work in the old technique of the white-on-red pots, has here made a first attempt in the technique of the red-on-buff ware, and has endeavoured to render as closely as possible the long-oared ships which were strange to him. In drawing the animals and steering-oars he has fallen back into the old accustomed style. If one may regard the elephant standards as pointing to Elephantine, then the pot would belong to the most southerly part of Upper Egypt, where the First Civilization was most firmly established, and where the Second Civilization only appeared as a foreign intruder.



Fig. 3.

The designs of these two pots therefore show mutual influences in style between the First and Second Civilizations of Egyptian prehistory, the diverse nature of which moreover manifested itself in the most striking manner precisely in the two entirely different types of painted pottery, the white-on-red and the red-on-buff ware.

Now since the introduction of Petrie's S.D. system it has been customary to assume an even development of culture in accordance with this system over the whole of Egypt; consequently such inconsistencies as the fact that red-on-buff pots sporadically appear during the First Civilization, *i.e.*, in S.D. 30-38, have led Petrie to the supposition that these pots were already during the First Civilization being produced "in an adjoining region from which they were rarely imported²." This "adjoining region" could have been, as I shall try to show, a part of Egypt itself. Thus, the purport of the following pages will be to examine some special features of both civilizations and to determine the culture-groups to which each belongs.³

It is striking that the S.D. system does not in reality apply with the same regularity to the whole of Egypt (*i.e.*, from Cairo to Ašwân, since prehistoric finds are completely lacking in the Delta), for graves of the First Civilization have so far only been found in the southern part of Upper Egypt, from ẖau el-Kebîr, through the great centres of Abydos and Nakâdah away into Nubia. In Middle Egypt, *i.e.*, from ẖau el-Kebîr northwards roughly to the point where the Bahr Yusuf turns off into the Fayyûm, no prehistoric finds whatever are known to me. Then follows in the northern part of Upper Egypt a group of cemeteries lying close together (Abušîr el-Meleḡ, Ḥaragah, Gerzah)

¹ Compare *Anc. Egypt*, 1914, 32 (PETRIE). Fig. 3, after PETRIE, *Prehist. Eg.*, XXIII, 2.

² *Prehist. Eg.*, 16, § 32.

³ What follows includes the essential results reached in my publication of the finds from Abušîr el-Meleḡ (*Das vorgeschichtliche Gräberfeld von Abušîr el-Meleḡ*, I. *Die archäologischen Ergebnisse*. 49. *Wiss. Veröff. der Deutschen Orient-Gesellsch.*, Leipzig, 1926), in connexion with my article "Vorgeschichtliches zur Libyerfrage" in *Zeitschr. f. ag. Spr.*, LXI, 16 ff., and the study called "Grundzüge der äg. Vorgeschichte" in *Morgenland*, Heft 12, Leipzig, 1927.

among which one may include those of ʿTarkhân and ʿTurah which are practically proto-dynastic: in not one of these has any trace of the First Civilization been discovered. I can give no explanation of the complete lack of prehistoric finds in Middle Egypt, which must have been just as closely searched for remains of cemeteries of the earliest down to the latest times as the rest of the country: the complete lack of products of the First Civilization among the finds at Abuṣir el-Meleḳ I can only explain (and the argument is only one *ex silentio*) by the supposition that they never existed in that district. The absence of First Civilization remains there is the more remarkable in that the finds made in the adjacent Fayyûm (see below, p. 271) are more closely allied to those of the First Civilization in southern Upper Egypt than to those of Abuṣir el-Meleḳ and its area. So long as white-on-red and black incised pots, disk-shaped mace-heads and other objects typical of the First Civilization have not been found north of ʿKau el-Kebîr we have no right, in my opinion, to assume the existence of the First Civilization for the whole of Egypt equally¹. Consequently the S.D. system with its First and Second Civilizations in chronological succession applies only to southern Upper Egypt.

The First Civilization has been fully, and in most respects certainly correctly described by Petrie in his *Prehistoric Egypt*, 47. In opposition to Petrie, however, I would see in the bearers of this culture no foreigners intruding from outside, but the indigenous Hamitic people, and in the slim ivory figurines and the steatopygous female figures of clay I would see only two branches of a single art, differentiated by the nature of the material used. Such a view does not prejudice the question whether these Hamites were or were not ultimately immigrants from Asia; the Hamitic colonization of Egypt and North Africa is in any case archaeologically beyond our reach. Unfortunately we have in Egypt no cave-finds or dwelling- or burial-places of other types with remains of skeletons, from which—and from which alone—anthropological conclusions with regard to the exterior of the Stone Age men in Egypt could have been drawn. We have, however, stone implements in plenty, and from them we may, in addition to the evidence of a transition from cave- to valley-settlements afforded by the places in which they are found², draw the important conclusion that in the Older Stone Age Egypt belonged culturally to the North African province. In Egypt, as elsewhere in North Africa, we have stone implements of Chellean, Acheulian and Mousterian types³, as well as those of the specifically North African Capsian⁴. This last replaces in North Africa the glacial cultures of the Later Palaeolithic in Europe, and it is thus impossible, on the ground of similarities of form between certain stone objects and bone harpoons

¹ The somewhat infrequent occurrence of black-topped pots of later types in the northern cemeteries does not contradict this, see p. 266. Quite isolated is the black incised bowl found by de Morgan at Dahshûr and said to belong to the time of Sneferu, *i.e.*, to the early Fourth Dynasty. See *Dahchour*, 1903, Pl. xxvii and *Cat. gén. Cairo*, 2189 (VON BISSING, *Tongefässe*, 46).

² Particularly clear in VIGNARD, *Bull. de l'Inst. franç.*, xx, 89-109; sketch on p. 106.

³ The French names are merely convenient labels for the types of implement. The chronological sequence of the three Old Palaeolithic cultures known in France, with their distinct content, has never been stratigraphically proved anywhere in Egypt. According to *Rivista Geogr. Ital.*, 1925, 111, P. Bovier-Lapierre has found Pre-Chellean, Chellean and Mousterian implements in three superimposed strata north-west of Cairo; cf. *L'Anthropologie*, xxxv, 37-46 and *Bull. de l'Inst. d'Égypte*, viii, 257-275. For the Old Stone Age in Egypt see EBERT, *Reallexikon der Vorgeschichte*, I, 48 ff. (OBERMAIER).

⁴ VIGNARD in *Bull. de l'Inst. franç.*, xxii, 1-76; he regards his finds at Sebil (Kom Ombo) as a kind of Aurignacian and has named them Sebilian. The shell-heaps so characteristic of the Capsian also occur at Sebil (p. 57).

found in Egypt, to speak, as Petrie does, of Solutrean and Magdalenian in Egypt¹. To discuss here the dates of these Stone Age civilizations would lead us too far afield: the lower figures of Schuchhardt², who, on the basis of the geological researches of the Swedish scientist de Geer, places for example the Aurignacian, *i.e.*, the first stage of the Later Palaeolithic in Europe, about 12,000 to 10,000 B.C., and the West European Tardenoisian and the northern Maglemosian culture down towards 5000 B.C., seem to a historically orientated mind more probable than the immensely high figures of many geologists. An unbroken development of the Late Capsian of Sebil near Kom Ombo down to the Badârî phase, the recently discovered forerunner of the First Predynastic Civilization, is not, or at least not yet, demonstrable. Chronologically speaking Sebil cannot be separated by a very long period from Bâdarî, since the Late Capsian roughly corresponds to the West European Tardenoisian, which Schuchhardt, as we have noted, brings down to 5000 B.C. Particularly striking is the absence of a true neolithic period in the Nile valley, where even at Badârî copper is already present in small quantities: only the finds from the Fayyûm (see p. 271) are purely neolithic in character.

The Badârî finds are especially important in that here for the first time in Predynastic Egypt three culture strata (Badarian, First and Second Predynastic Civilizations) have been found clearly lying one above the other³. Without wishing to anticipate in any way the publication of the Badârî finds which one hopes to see in the near future, I should like to note that, among much that is clearly new in type, a connexion with Nubian pottery is obvious, more particularly in the rippled bowls of black-topped ware. The beginnings of this black-topped ware are to be found without doubt in southern Upper Egypt or in Lower Nubia, where it survived, despite changes of various kinds, into the Nubian C-group, and beyond it down to about the middle of the second century B.C. Badârî is linked to the First Civilization of southern Upper Egypt and Nubia by this ware, which throughout thousands of years formed one of the chief products of the dwellers in those parts of the Nile valley. During the Second Civilization (and the fact shows how deeply it was rooted) it maintained its popularity in the face of various new types of pottery, and spread, though in altered forms, further down the Nile. In northern Upper Egypt, however, it never forms the bulk of the contents of the tombs, as is shown by Abuşîr el-Meleğ, where, in nearly 850 graves, only five black-topped pots were found⁴.

Quite different is the impression made by the white-on-red ware so typical of the First Civilization. The most striking fact about this is that it seems to be completely lacking in the Badârî culture, is found only sporadically in Nubia⁵, and has no descendants in the Nubian C-group. It must therefore have had a particularly strong local connexion with southern Upper Egypt with its centres Abydos and Nakâdah. Moreover, within this area we can localize in separate districts the two different styles which I have always observed in this ware, the one using a true white paint in thin, clean strokes (Pl. xxiv, 1-3) and the other a paint more accurately described as yellow, in

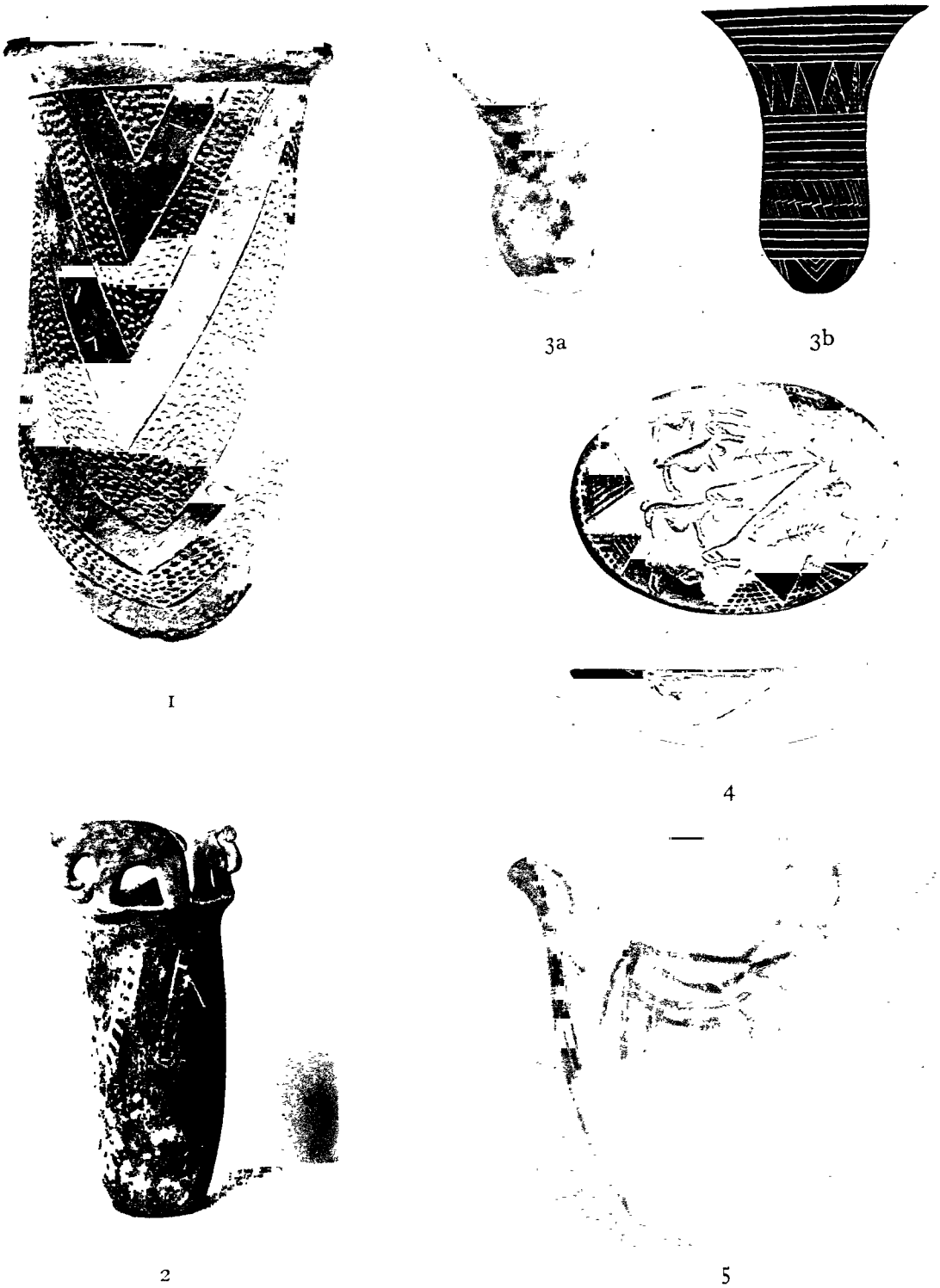
¹ Miss Caton Thompson is quite right in opposing the assumption of a Solutrean in Egypt and the Fayyûm. *Journ. Roy. Anthropol. Soc.*, LVI, 316 ff.

² *Alteuropa*, 2nd edition, 1926, 18 and 34.

³ *Anc. Eg.*, 1924, 33 ff.

⁴ SCHARFF, *Abusir el-Meleğ*, 28.

⁵ For white-on-red ware from Nubia see REISNER, *Survey* 1907-8, Pl. 60 b, 8 and p. 122, Grave 61 (one bowl and one sherd from the early predynastic Cemetery 17): JUNKER, *Kubanieh-Süd*, 48 (two sherds, middle predynastic, explained by Junker as due to the remarkable survival of old forms in Nubia).



Egyptian and European Pottery.

1. The Hague, Carnegie Loan Museum, T774. 2. Berlin Eg. Mus. No. 22388.
3a. Berlin, Museum für Völkerkunde : Culture of the lake-dwellings, Western Europe.
3b. Univ. Coll., London (Corpus XXVII 58).
4. Formerly Coll. Golenishchef N 2947. 5. British Museum 49025.

thick and thickly laid strokes often producing an irregular effect (Pls. xxiv, 4; xxv, 1-2; xxvi; xxvii, 2, 4, 5; xxviii). So far as I can discover, only the first type with the finer painting occurs at Naḳādah and Diospolis. The examples of the second type, which is nowhere published in groups of any size, all come, so far as their provenance is known, from other sites, Pl. xxv, 1 from Ḳau el-Kebir, Pl. xxvii, 5 from Maḥasnah near Abydos, while Pl. xxvii, 2 is said to be from El-Khozam near Luxor.

What is more, the African connexions of the First Civilization are most clearly recognizable in the representations on the C-ware¹. Out of the many known examples I shall here select only three, the men wearing the "Libyan" phallus-sheath and the "Libyan" feather, the "Libyan" dog and the "African" elephant.



Fig. 4.

(After PETRIE, *Prehistoric Egypt*, Pl. xviii, 74.)

For the representation of men and dogs a bowl in Moscow in the collection formerly belonging to Golenishchef is of great importance² (Pl. xxvii, 4). It shows an archer going to the hunt with four dogs. The hunter clearly wears the phallus-sheath on his girdle and a feather in his hair. He resembles many a figure in the North African rock-drawings³ the origin of which several scholars would push back as far as the Palaeolithic Period⁴. In the dogs are to be recognized, according to the zoologist Dr. Hilzheimer, ancestors of the *t-sm*-dogs of historical times, which occur, as is well known, in the company of other Hamitic peoples of North Africa⁵. The figure of the hunter

¹ The connexion so often insisted on between the white-on-red ware and modern Kabyle pottery has never impressed me.

² *Musée des beaux arts Alexandre III à Moscou*, Parts 1, 2, Pl. ii left and pp. 19-20 (Turaief). Cf. *Zeitschr. f. äg. Spr.*, LXI, 21 and Pl. ii, 2.

³ FROBENIUS-OBERMAIER, *Hädschra Maktuba*, e.g., Pls. 72 and 125.

⁴ *Jahrb. f. prähist. u. ethnogr. Kunst*, 1927, 13 ff. (Herbert Kühn).

⁵ L. ADAMETZ, *Herkunft und Wanderungen der Hamiten erschlossen aus ihren Haustierrassen*, Vienna, 1920, 87. Cf. also the Libyan dog-name Abaikur on the well-known stela of King Antef, *Cat. gén. Cairo*, 20512. The dog bearing this name is racially very closely allied to the dog on the Golenishchef bowl.

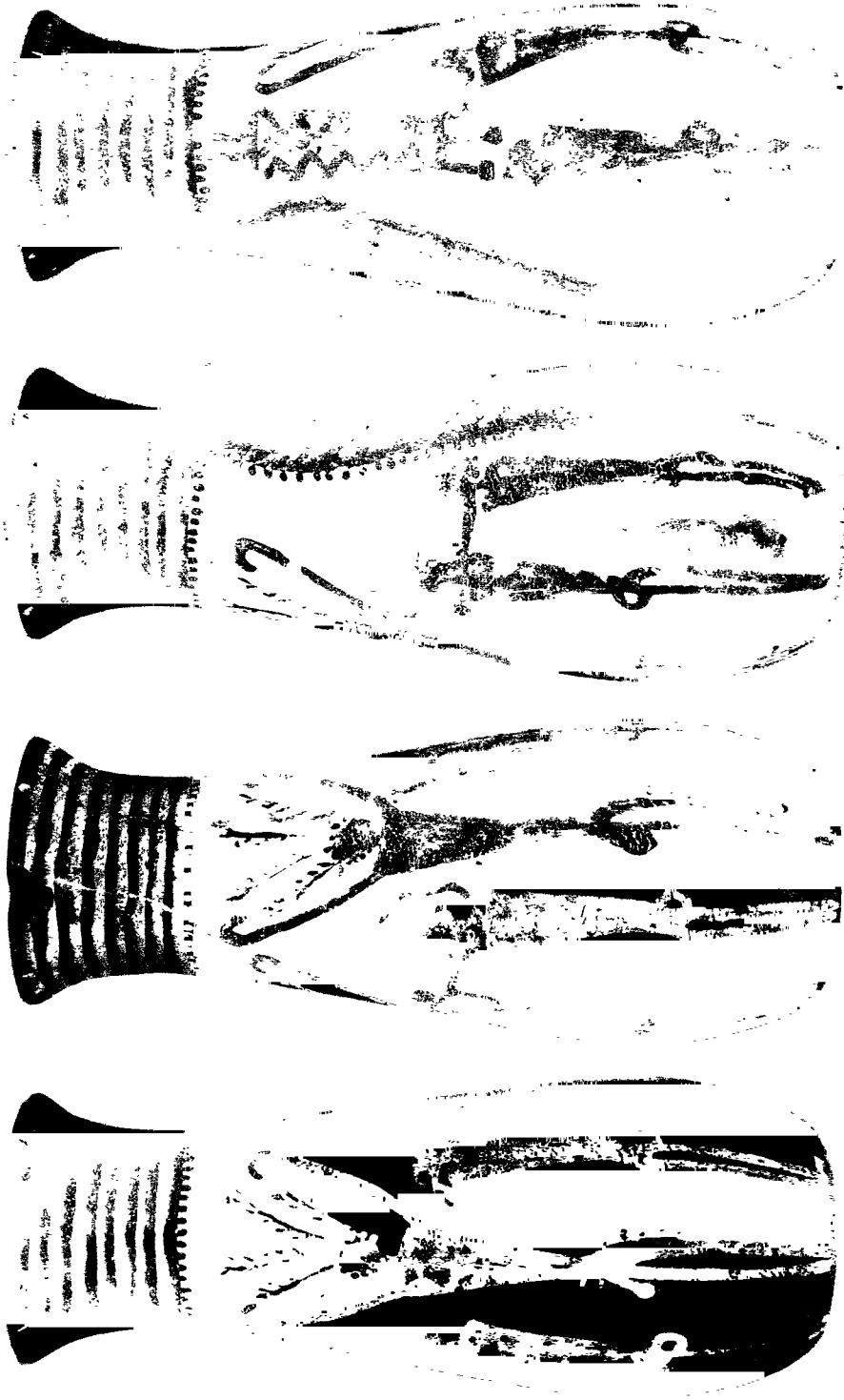
also has a certain resemblance to the larger figure on the well-known white-on-red pot at University College, London (Fig. 4), the scene depicted on which has been thought to represent a duel¹. The strikingly large phallus-like object might be explained as a phallus-sheath, and in his hair, in place of the feather, the man wears two hair-pins. For comparison with this piece I am able, through the kindness of Professor Capart, to figure the fine vase E 3002 of the Brussels collection. It is 29 cm. high, 9.6 cm. wide at the mouth, and 7.8 cm. at the base (Pl. xxviii). Its provenance is unknown. Below the seven yellowish white bands which surround the neck is an eighth band, from which



Fig. 5.

hangs a row of drops and two designs reaching down, the one to the middle of the vase and the other to the bottom, both of which are unintelligible to me. The main space is occupied by eight figures of men, two of whom surpass the others in height by more than a head. The two tall figures stretch their arms upwards: twigs are stuck in their curly hair and the male organ—if this be not the phallus-sheath—is rendered exactly as in the larger figure on the vase of Fig. 4. Like the smaller figure on that vase the six on the Brussels vase have long flowing hair, and they further resemble that figure in having the phallus represented in the form of a curved handle. Four of these figures form two pairs, the hindermost figure in each of which lays his arm on the shoulder of the man in front of him; these two pairs are grouped symmetrically about the large figure in the middle. The two remaining smaller figures are not touching one another, but stand one behind the other turning to their right in the direction of the larger

¹ *Prehist. Eg.*, xviii, 74.



Predynastic white-on-red vase.

Brussels, Musées Royaux du Cinquantenaire, F. 3002. Height 29 cm.

figure. That all the figures on this pot, as well as the two on the University College pot, are to be interpreted as male is beyond doubt, despite the fact that the position of the arms and the coiffure of the larger figures point in reality to female customs¹. I do not venture to give any explanation of the scene. Definite proof that the phallus-sheath regarded as Libyan was already in use in the First Civilization is afforded by the ivory figure found at Mahasnah, which comes from a grave which can be dated to the First Civilization².

Another reliable proof of the African connexions of the white-on-red ware are the representations of elephants and hippopotami which so frequently occur on this ware (hippopotamus, *e.g.*, Pl. xxiv, 2). In this connexion I reproduce in line-drawing the elephant depicted on a pot from Mahasnah, rendered, despite all its primitiveness, with great truth to nature, down to the tail-tuft (Fig. 5: view of the pot, which also shows oxen and other animals, *cf.* Pl. xxvii, 5)³. To this may be added a vase in the Berlin Museum which shows two (originally three) moulded elephants attached to the rim (Pl. xxvii, 2)⁴. This type of ornamentation seems to me to be a characteristic of the white-on-red ware⁵. Closely related to it is the ornamentation of the surface with animals worked in relief, known to me only from the First Civilization (Pl. xxv, 4; *cf.* the parallels given under No. 10). In this I find a contrast with the Second Civilization, for in the painted wares which are most completely peculiar to it from the very beginning these two animals never appear: clearly they cannot have been known in the area where the Second Civilization had its rise. The only exceptions are the vase with the elephant-standards (Fig. 2), whose special connexion with the white-on-red ware of the First Civilization has been mentioned on p. 263, and a vase in the form of a hippopotamus with red design⁶, which, however, seems not to belong to the earlier stages of the Second Civilization.

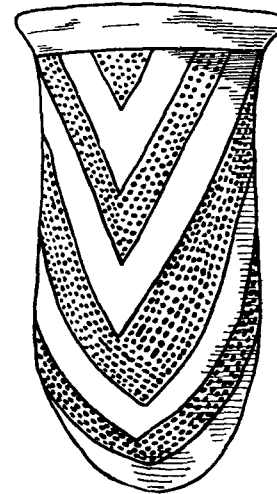


Fig. 6.

The black incised ware (N-class) also belongs without doubt to the Hamitic-African culture stratum of the First Civilization, although no S.D. datings for it have been established. This seems to be proved in particular by the recrudescence of this ware in the Nubian C-group in the second millennium B.C., which there goes hand in hand with the remodelling of the black-topped ware. I am able to publish here a new example of this ware too, by the kind permission of Dr. Scheurleer and Professor von Bissing (Pl. xxvii, 1 and Fig. 6). It comes from the von Bissing collection and is now in the Carnegie Loan Museum at The Hague (No. T 774). It is 13 cm. high and 7 cm. broad at the mouth, made of the blackish brown clay usual in this ware. It is bag-shaped and shows a triple ribbon pattern made of punctured and white-filled dots. Close under the rim are two small

¹ It is in any case remarkable that no representation of a woman occurs in the whole of the white-on-red ware. The interpretation of the large figures as women, not improbable in itself, might be supported by reference to BORCHARDT, *Sahure*, II, Pl. 1, lower row, where a Libyan woman, probably a princess, wears an object similar to the phallus-sheath.

² AYRTON-LOAT, *Predyn. Cemet. at El-Mahasna*: *cf.* *Journal*, II, Pl. xii, 3.

³ Mahasnah, now in the B.M., No. 49025.

⁴ *Zeitschr. f. äg. Spr.*, LXI, 16 and Pl. i, 1.

⁵ *Op. cit.*, Pl. ii, 1 = *Cat. gén. Cairo*, 11570: *El-Mahasna*, XI, 3 = *Journal*, II, Pl. xii, 2.

⁶ *Cat. gén. Cairo*, 2147 (VON BISSING, *Tongefasse*): *cf.* the hippopotamus vase from Diospolis, *Pottery Corpus*, XVIII, F 67, of S.D. 61.

holes bored (not traces of an ancient mending), and towards the bottom is a hole, perhaps made on purpose. The form is striking and makes a completely foreign impression among the rest of the predynastic pottery of Egypt; it is related to only one equally isolated vase of the same ware (Pl. xxvii, 3 b, after *Pottery Corpus*, xxvii, 58). A vase related to these has recently been found in the Badâri culture, as Professor Petrie was kind enough to show me in University College: it is likewise in the incised technique. Both the two last-mentioned vases are of bag-shape but have the rim much more strongly flared. For comparison with the vase from the Hague collection and that published in *Pottery Corpus* I figure two vases which belong to the great West European culture circle (Fig. 7, after SCHUCHHARDT, *Alteuropa*, and Pl. xxvii, 3 a), linked together by their provenance, and answering fairly closely to the Egyptian in form. Since the Egyptian vases are almost unique, while the West European on the other hand are thoroughly typical of their milieu, the possibility of a connexion need not be regarded too sceptically, the more so since other comparisons crop up between forms which are rare and striking in the First Civilization of Egypt but common in Western Europe, more particularly in Spain¹. For the present this is mere conjecture, but the time will perhaps come when finds from Hamitic North Africa which would serve as links, but which are at present either completely lacking or insufficiently published, will prove ancient routes of connexion between the First Civilization and neolithic Spain. The cultural connexion of Egypt with North Africa and so with West Europe of which we have a picture in the Older Palaeolithic Period and on into Capsian times may have persisted in essentials through the Badâri culture down into the First Predynastic Civilization, allowance being of course made for the separate development conditioned by the nature and position of the Nile valley. On the other hand I find nothing in the First Civilization which indicates any kind of connexion with Palestine or the rest of Nearer Asia.

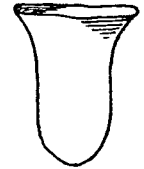


Fig. 7.

A general connexion with North Africa is also indicated by the well-known "Libyan" arrow-heads in their two forms (Fig. 8)² and a type of vase of truncated conical form which was recorded by Oric Bates at Marsa Matrûh west of Alexandria, *i.e.*, in Libya itself³, and also found by Reisner in an early predynastic grave in southern Upper Egypt⁴ (Fig. 9). In the distribution of both these objects one may see the connexion at least between, on the one hand, the Libyan oases, including the Fayyûm, the districts west of the Delta, where the Libyans lived in historic times, and probably the Western Delta itself,

¹ Cf. my *Grundzüge, etc.*, 23 ff. and Pl. 3. To the same enquiry belongs the question of the nature and origin of the Iberians, who are said to be of Hamitic origin and to have first settled in South Spain, EBERT, *Reallexikon der Vorgeschichte*, VI, 4, § 11 (BOSCH-GIMPERA, treated on archaeological grounds), p. 6, § 4 (POKORNY, on linguistic grounds). There are serious chronological difficulties, for the neolithic cultures of Spain which are of importance for these connexions are at present attributed to the third millennium B.C.

² Provenances: Iberian Peninsula, NILS ÅBERG, *La civil. énéolithique dans la Péninsule ibérique*, Uppsala, 1921, 130, Fig. 162, 1-5; Mauretania, *Prähist. Zeitschr.*, VIII, 61, Fig. 28 (FROBENIUS); Algeria, E. F. GAUTIER, *Sahara algérien*, I, 1908, Pl. xix, fig. 37; Oasis of Siwa, O. BATES, *The Eastern Libyans*, 145, fig. 56; the finds from the Fayyûm and Upper Egypt are well known; Nubia, *Museum of Fine Arts Boston Bulletin*, 1921, XIX, 28 (REISNER). The origin of the Libyan arrow-head is to be seen in the tanged points of the North African Aterian, which is a form of the Mousterian, cf. EBERT, *Reallexikon der Vorgeschichte*, IX, Pl. 167, c, d (OBERMAIER).

³ *Anc. Eg.*, 1915, 163-4, nos. 12-13.

⁴ *Harvard African Studies*, I, 1917, 289, Fig. 6. Cf. *Prehist. Eg.*, XXXVI, 52-54 and XLII, 215-8; *Zeitschr. f. äg. Spr.*, LXI, Pl. ii, 3. For copies of this stone vase-form in blackened pottery see *Pottery Corpus*, XIX, 96, a-c of S.D. 38, 34.

and, on the other hand, Upper Egypt and Nubia, roughly from Abydos southwards¹. In the cemeteries of northern Upper Egypt, on the contrary, nothing Libyan in this sense has been found, no white-on-red or black incised pot, no Libyan arrow-head, no truncated conical stone vase. This is the more striking since some of these cemeteries, such as Haragah and Abušir el-Meleğ, lie so close to the Fayyûm.

The finds from the Fayyûm, discovered and carefully published by Miss Caton Thompson², give for the first time a somewhat clearer picture of the prehistoric conditions, hitherto merely guessed at, which prevailed in this remarkable area. I cannot here go into details but will merely emphasize two points which seem to me of paramount importance. Here in the Fayyûm we have for the first time true neolithic finds without any trace of copper. Moreover the finds as a whole show an independent stamp when compared with those of Egypt, including those of the Badâri culture, which has sometimes been mentioned as showing the closest relation to the Fayyûm finds. These latter have nothing in common with the Second Civilization, while they are connected with the First at least by the "Libyan" arrow-head and the disk-shaped mace-head. No



Fig. 8.

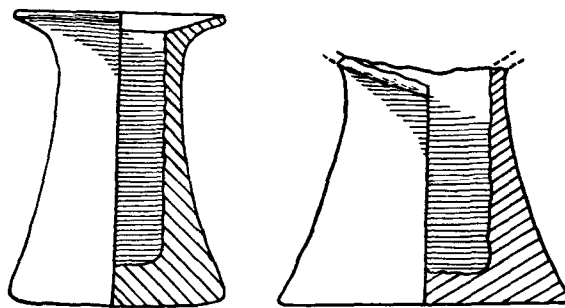


Fig. 9.

examples of white-on-red or black incised ware have yet been found in the Fayyûm. That the Fayyûm finds belong moreover to the Hamitic-African culture circle described above is not doubted by Miss Caton Thompson. It is to be hoped that further finds will allow of a more exact chronological comparison between the Fayyûm finds and the Egyptian. The finder is rightly very cautious in her dating, and only with all reserve does she place the Fayyûm finds earlier than those of Badâri, mainly on the ground of their primitiveness. However this may be it is precisely the primitive nature of the Fayyûm pottery which makes the remarkable perfection of the Egyptian pottery of roughly the same age so evident.

Here in closing my discussion of the First Civilization I will once more emphasize the fact that this culture should not merely be characterized as "Libyan." I shall rather, in all that I have to say, use this term in the sense of the common North-African-Hamitic motherland, including Egypt and Nubia, where the First Civilization, thanks to the special conditions of the Nile valley and its people, developed its particular Egyptian stamp.

Now that we have studied the North-African-Hamitic culture circle, which can be followed as a whole from the Palaeolithic period down into the First Civilization, we are

¹ In this connexion may be further mentioned the sherd of a black-topped pot with the ∇ -crown of Lower Egypt dealt with by Wainwright in *Journal*, ix, 26 ff. With this we may compare the case of the goddess *'Imn.t* of Thebes who, while a definitely Upper Egyptian deity, yet wears the Lower Egyptian ∇ -crown: see LANZONE, *Dizionario*, xxv, 1 and 3.

² *Journ. Roy. Anthropol. Soc.*, lvi, 309-323.

in a position to approach the question proposed on p. 264 as to the relations to one another in time and space of the First and Second Civilizations. What were the conditions prevailing in the northern part of the country when the First Civilization of Upper Egypt was in full bloom¹? Junker, in his publication of Ṭurah, p. 2, fig. 1, has illustrated a number of blackened vases which were found not in his excavations but at the railway station of Ṭurah and which are clearly different in form and material from the black-polished pottery of both the First and the Second Civilizations. Two other blackened vases similar to these were found in making a street near Gîzah and are now in the Cairo Museum². This material, unusual as it is, seems to me for the present too scanty and too uncertain in date to be claimed for the First Civilization in North Egypt³. I have shown in my publication of the finds from Abuşîr el-Meleğ that the S.D. system does not hold for that site, and in connexion with this I have tried to show that the finds from there are in part earlier than the S.D. system would seem to make them, and can consequently to some extent replace the First Civilization in the north⁴. My first conclusion, referring to the S.D., I still uphold, but I have since become convinced that the second is incorrect. The whole character of the finds from Abuşîr el-Meleğ is, if one lays aside the S.D., thoroughly late predynastic, in part even protodynastic, although there are no inscriptions. Thus neither Abuşîr el-Meleğ nor Gerzah nor Ḥaragah can form a substitute for the missing First Civilization in North Egypt.

Nevertheless I believe that the origin of the Second Civilization is to be sought in North Egypt, and more especially in the north-eastern part of the Delta and the area lying between the Delta and Palestine. Its predecessors are unknown to us owing to the lack of finds of any kind from those districts. The oldest cemetery of the northern part of Egypt, Gerzah, shows an already very advanced stage.

We may from the outset in my opinion dismiss the possibility that the Second Civilization developed in southern Upper Egypt out of the First, however much the S.D. system, built up on the finds of Nağâdah and Diospolis, seems to support such an idea. Are we for instance to imagine that one day the inhabitants of Nağâdah declared "From to-day onward we will use no disk-shaped mace-heads, but pear-shaped clubs," or "From now onward we will no longer decorate our red pots in white but we will paint in red on unpolished buff pots"? Such contrasts as these prove conclusively that the Second Civilization cannot have arisen where the First was indigenous, but that it was at first something quite new and strange in the area occupied by the First Civilization: the wavy-handled and the red-on-buff wares in particular show quite a new aspect, with which the mere development of the black-topped pottery out of the Badarian wares is in no way comparable. The same is true of all the other districts culturally connected with the First Civilization which we have mentioned above: the Second Civilization has at base nothing whatever in common with Nubia, or with Badârî or with any of the other Hamitic culture areas of North Africa. Thus geographically there remain as possible places of origin for the Second Civilization only North Egypt, the Delta, the Eastern Desert and the frontier land in the direction of Sinai and Palestine⁵.

¹ It is conceivable that the original frontier between South and North lay in the district of Cusae, where WAINWRIGHT (*Ann. Serv.*, XXVII, 93 ff.) has proved the existence, at least as far back as the Old Kingdom, of a frontier near Gebel Abu Fodah. Cf. also SCHARFF, *Abusir el-Meleğ*, 78.

² *Cat. gén. Cairo*, 3351-2 (VON BISSING, *Tongefässe*, 45 and Pl. iv).

³ Cf. also on this point the end of my article in *O.L.Z.*, 1926, 719 ff.

⁵ PETRIE, in *Prehist. Eg.*, 48, pronounces himself in favour of the Eastern Desert or the southern half of the Sinai Peninsula.

⁴ p. 78.

No one will now doubt that the wavy-handled pots of Egypt are connected with those of Palestine. Since the form which can be proved to be the earliest in Egypt agrees closely with the Palestinian¹, and since this type of vase had its separate development in the two countries, and since its area of distribution never surpassed Egypt-Nubia on the one side and Palestine on the other, its place of origin must lie somewhere in the middle between the two areas, be it in the Eastern Delta, or in Sinai, or in South Palestine². Yet in no case can I imagine the origin of the wavy-handled pots in Upper Egypt or in Nubia as an invention of the First Civilization. The red-on-buff pots too point to some extent to the Delta, as Newberry has shown by an analysis of the ships' standards³. A type of pottery on which representations of ships are so frequent points in itself to a region richly traversed by waterways, a description better answered by the Delta than by Upper Egypt with its one navigable river. The same is true, as Newberry has likewise emphasized, of the representations of flamingos, which are still characteristic water-birds of the Delta lakes. To this evidence may be added the occurrence in the Second Civilization of the falcon and of the ox-head amulet, which point to Delta deities⁴. On the other hand there is a certain difficulty in fixing the place of origin of the brightly coloured stone vases whose connexion with the red-on-buff pots is so well known. Petrie has rightly insisted that the home of the stone vase industry can ultimately only be sought in the mountains between Egypt and the Red Sea, where all the kinds of stone used for the purpose do actually occur, and these mountains do in effect stretch fairly far northward. However one pictures in detail the coming together of the various features known to us from the Second Civilization it is at least certain that the mountain region of the Eastern Desert belongs to the same culture area as the greater part of the Delta.

In addition to the materials already mentioned there are three rarer materials, faience, lapis lazuli and obsidian⁵, to be considered. The first, on the ground of its name in Egyptian, may safely be traced to the Western Delta (see p. 274), and the other two must have first reached Egypt by way of the Delta, and were therefore probably widespread there before they reached Upper Egypt as items in the Second Civilization. The pear-shaped club, too, which is such a distinguishing mark of the Second Civilization as against the First, is ultimately eastern in its connexions: it is found, for example, very early in Babylonia⁶; in the specialized form of the knobbed club⁷ it is frequent in Nearer Asia, but very rare in Egypt. By such references to Nearer Asia, however, I do not intend to give the impression that I regard the Second Civilization as something foreign in Egypt. It is just as Egyptian as the First, but it

¹ Cf. *Abusir el-Meleg*, 18 and Pl. 9.

² Cf. A. HERTZ, *Wiener Ztschr. f. d. Kunde des Morgenlandes*, xxxv, 66-83; the author claims Lower Egypt as the home of the wavy-handled pottery.

³ *Liverpool Annals*, v, 132 ff.; out of 288 standards collected by Newberry 196 point to the Delta.

⁴ Damanhûr, "Town of Horus" in the Western Delta, Greek Ἱερακωνπόλις according to *Papiri della Soc. Ital.*, v, No. 543, is according to Sethe the original falcon-town: from here began the victorious move of the falcon-god into Upper Egypt (Hierakonpolis-Nekhen, Behdet-Edfû). The rarely occurring falcon standard on the red-on-buff ware may fall into the same context. The Central Delta is a home of bull-gods; the bull's head amulet No. 10045 of the Berlin Collection was found at Benhâ in the Delta.

⁵ For obsidian see now WAINWRIGHT in *Anc. Eg.*, 1927, 77 ff., who regards Armenia as the chief source of the obsidian brought to Egypt: lapis lazuli was introduced, according to MÖLLER, *Metallkunst*, 14, from the Euphrates country, doubtless through Palestine.

⁶ In the hand of King Eannatum on the Vulture Stela; DE SARZEC, *Découvertes en Chaldée*, Pl. 48.

⁷ DE MORGAN, *Délégation en Perse*, XIII, 21, Fig. 109 (Susa); *Prehist. Eg.*, xxvi, 63, 65 (Egypt).

was an Egyptian working out of a culture having its roots in another motherland, one connected with Nearer Asia. It occupied North Egypt as the First occupied South Egypt, perhaps a little later, but its earlier stages, which would correspond to the First Civilization in the south, are wanting.

There are remarkably few human figures which can be attributed to the Second Civilization¹. Petrie has referred to a fragment of ivory with a representation of a bearded man bearing a stone vase on his head which shows a certain resemblance to those of the Second Civilization². This man, who has his parallels on other tablets³, clearly shows the features known to us in historic times as typical of the inhabitants of Sinai and Palestine. Thus the bearers of the Second Civilization were very probably related in race and speech to those inhabitants of Sinai and Palestine, and spread first over the Delta from the east towards the west, which was originally Libyan. Then they must have forced their way into Upper Egypt as a united Delta-people and implanted their culture in the south as the Second Civilization. In this theory, which points to North Egypt as the home of the Second Civilization, and which I believe I have shown to be supported by the archaeological evidence, I come to the same conclusion as Professor Sethe did on palaeographical grounds in his article on the hieroglyphic signs for west and east⁴.

The following consideration of Sethe's seems to me proof positive of a movement up the Nile⁵. The Semitic stem *imn* means "right," and, among the Arabs and Palestinians, who orient themselves by the east, "south." In Egypt on the contrary the same stem means "right" and "west." This change in the meaning of the stem as applied to the points of the compass can only be explained by supposing that the people who brought the Semitic word *imn* "right" to Egypt moved from north to south up the Nile valley, so that the west lay on their right. Had the immigration been from south to north—and these are, in the nature of things, the only two possibilities offered by the Nile valley—"right" would have stood in Egyptian for "east."

We can no longer trace in detail the process by which the First and Second Civilizations became united. We have already seen that an occasional red-on-buff reached the south of Upper Egypt even before S.D. 38, and on the other side the white-on-red technique in the south, as Pl. xxvi shows, attempted to appropriate to itself what was new to it in the red-on-buff of the north. Moreover, much that belonged most closely to the tradition of the First Civilization survived later, as the finds show us⁶. Nubia was likewise drawn into the circle of the Second Civilization, though here the original tradition held on more tenaciously until it broke out anew in altered forms in the C-group. In the coalescence which we find completed in the Late Predynastic Period the Second Civilization had completely the upper hand. Pots and implements of the Early Dynastic Period may be traced back in essentials into the Second Civilization. I do not agree with Petrie that it is necessary to suppose a third and new civilization beginning with S.D. 63, for the immense cultural development just before and during the First Dynasty is far more intelligibly explained by a coalescence of these two cultures already on the spot, the one with Libyan-African colouring, the other with

¹ E.g., *Abusir el Meleg*, Pl. 39, no. 433, and p. 62.

² *Royal Tombs*, II, Pl. iv, 6.

³ *Op. cit.*, Pl. iv, 12, 15, 20.

⁴ SETHE, *Die ägyptischen Ausdrücke für rechts und links, etc.*, in *Nachr. d. k. Ges. d. Wiss. zu Göttingen*, Phil.-hist. Kl., 1922, 197-242.

⁵ *Op. cit.*, 241, § 11.

⁶ So we find sometimes the disk-shaped mace-head and the pear-shaped side by side, e.g. *El-Mahasna*, Pl. xx, 3.

Semitic-Nearer-Asiatic, than by the assumption of an exotic "dynastic people." The numerous relations with Palestine, Syria, Mesopotamia and even Crete which for the most part first become evident in the Late Predynastic Period are sufficiently explained by the increasing cultural and political importance of an Egypt no longer confined within the old frontiers. On this point it is not necessary to enter into any detail¹. I refrain, too, from attempting here any historical reconstruction of the period before the First Dynasty or entering upon any questions of detail concerning the Early Dynastic Period, however attractive such questions may be². My aim in this article has been to derive my conclusions so far as possible solely from archaeological evidence.

In conclusion a word on the question of chronology. Many scholars are sceptical about admitting relations, not in themselves incredible, between finds from Egypt just before and during the First Dynasty and identical or similar finds from Jericho, Byblos³, Assur, Susa, to mention only a few sites out of many, because the Egyptian finds cannot be placed later than in the middle of the fourth millennium while those from Nearer Asia hardly reach back to 3000 B.C. Even those who admit the relations claim Egypt in each case as the originator⁴. Now in the first place Eduard Meyer in the appendix to Vol. I of his *Geschichte des Altertums* has brought Menes down to 3197 B.C., though he expressly allows for an error of two centuries either way (*i.e.*, 2997-3397 B.C.)⁵. On the other side the finds of recent years have tended to confine into an ever narrower area the Nearer Asiatic culture referred to above, and that without reference to Egypt and quite uninfluenced by her chronology: it is firmly fixed within the limits of the chronology of Babylonia, which at present does not go back beyond 3000 B.C.⁶. The Egyptian and the Nearer Asiatic sides are by no means so far apart in date, especially if we adopt the lower limit allowed by the margin of error of 200 years offered by Eduard Meyer for the date of Menes. The chronology of the Old Kingdom, extremely problematical owing to our lack of a Sothic date, depends for the earliest period on the figure 955 in the Turin King List, of which no acceptable explanation has yet been given. This figure is taken by Eduard Meyer as the total of the years from the First to the Eighth Dynasty. The figure of 419 derived from this for the 18 kings of the first two dynasties whose names have survived seems remarkably high. The lengths of lives which can be determined from the various tomb inscriptions naming kings of the Fourth and Fifth Dynasties show clearly that Eduard Meyer's figures represent an extraordinarily high estimate⁷. I can suggest nothing more certain in their place, but I should like to emphasize the fact that the Egyptian chronology of the third and fourth millennia B.C. accepted by most scholars is open to the gravest doubts. The archaeological fact that a lively interchange of products and culture between Nearer Asia and Egypt existed just before and during the First Dynasty appears to me on the other hand more important precisely because it is more certain. Since Babylonian chronology is more

¹ Cf. FRANKFORT, *Studies*, I, 93 ff.

² Cf. *Grundzüge*, 46 ff. A reconstruction of the historical conditions in the earliest times on the basis of religious texts of the late era, particularly with reference to the Osiris myth, is given by JUNKER, *Die Mysterien des Osiris*, in *Internat. Woche f. Religions-Ethnologie*, III, 1922, 414-426.

³ I would draw special attention to the figure of a baboon in MONTET, *Fondation Piot*, xxv, 247, Fig. 10 right, which exactly resembles the early dynastic baboon-figures from Abydos.

⁴ ED. MEYER, *Die ältere Chronologie Babyloniens, Assyriens und Ägyptens*, 1925, 40.

⁵ *Op. cit.*, 68-9.

⁶ *Op. cit.*, 39; further CHRISTIAN in *Mitt. d. Anthropol. Ges. Wien*, LIV, 37 and LV, 186-7. ANDRAE, for example, dates Stratum H at Assur, which shows many connexions with Egypt, about 3000 B.C.

⁷ Cf. for details on this point *Grundzüge*, 51 ff. and *O.L.Z.*, 1928, 73.

firmly settled and does not allow us to go back beyond the figure 3000 I see no other choice except for us on the Egyptian side to accommodate ourselves to that figure. So long as no compelling chronological grounds for the contrary appear we shall not need to go further back than 3000 B.C. for the date of Menes. If we now, as a pure supposition, allow the fourth millennium for the spread of the Second Civilization in Upper Egypt, and the fifth for the development and bloom of the First, including perhaps Badârî and the Fayyûm, we should get a date of about 5000 B.C. for the dividing line between this and the immediately preceding Capsian culture of Egypt and North Africa (see p. 266), which according to Schuchhardt¹ corresponds to the end of the post-glacial period in Europe (Tardenoisian, Maglemosian).

APPENDIX.

Since I wrote the above paper in the autumn 1927, some new material has come to my knowledge, which I wish shortly to record. M. le Père Bovier-Lapierre has been excavating during the last few winters in a neolithic settlement with cemeteries in the north-eastern desert near Helwân (*Compte rendu du Congr. Internat. de Géogr.*, Le Caire 1925, iv, 268-282). One of his most important results in relation to this paper is the discovery in the graves of several blackened pots of the same kind as those mentioned above from the Turah Railway Station (see above p. 272). Sherds of a similar black pottery were found last winter in the Western Delta, near the entrance of the Wâdî Natrûn, together with sherds of a polished and an unpolished red pottery. Of this we await a preliminary report from Professor Junker, which will appear soon in the papers of the Vienna Academy of Science. Thus the possibility of a special First Civilization in the Delta is becoming greater and greater, and it is of the highest interest to recognize that this possible First Delta Civilization is linked with the neolithic Fayyûm-groups by its flint material, axes, saws, and "Libyan" arrow-heads. On the other hand, the pottery, as will be seen, is somewhat different from the Badarian, from the Nubian and from the pottery of the First Upper Egyptian Civilization. The neolithic culture of the Fayyûm, belonging to the Hamitic or African culture-circle, seems to be the parent both of the First Civilization in Upper Egypt with Badârî and Nubia and also of the different First Civilization in the western part of the Delta. Now since the Western Delta and the Helwân-region also belong to this group, only the north-eastern part of the Delta remains for the origin of all the new material of the Second Civilization (see above p. 273). As, however, finds are still lacking from this part of the Delta, this conclusion is a mere hypothesis, however possible.

I must mention in conclusion a study of Professor Junker on the same subject, which appeared this spring in the *Festschrift P. W. Schmidt*, 865-896. On some points Junker is certainly right, on others I am unable to follow him, as I have explained above. There is no room in the present article for a detailed controversy. Besides, the discrepancy of detail between our results is to my mind completely outweighed by our general agreement on the main issues (Junker, *op. cit.*, 890 and my *Grundzüge*, 46). This agreement is of the more value in that we started from totally different standpoints, Junker working mainly on mythological material and I entirely on archaeological. Let us hope that further excavation in the Delta will throw fresh light on the dark problems of Egyptian prehistory.

¹ *Alteuropa*, 2nd edit., 1926, 34.

SUEZ AND CLYSMA

BY J. J. HESS

In an article on the Isthmus of Suez in Antiquity¹ Professor H. Guthe seeks to prove two things: (1) that the Red Sea reached as far as the Birkat et-Timsâh or thereabouts, and not merely to Suez as is held by Kùthmann, Eduard Meyer and others; (2) that Clysma, Al-Ḳulzum in Arabic authors, did *not* lie at the modern Suez. The first of these two propositions is true, the second I believe to be false.

In favour of no. 1 is the following passage from Yâkût², who, after narrating how the canal from Fostât to the Red Sea was made in the year 23 of the Hegirah, and was used down to ʿOmar ibn ʿAbd al-ʿAzîz (86–93 of the Hegirah), continues “Then the sand filled it up and it was blocked and came to an end at Danab at-Timsâh (*i.e.*, ‘Crocodile’s Tail’) in the neighbourhood (or in the direction) of the sand of Al-Ḳulzum.” This passage is out of Al-Kindî, who died in the year 961 A.D. Danab at-Timsâh, “Crocodile’s Tail,” is meaningless unless the Birkat et-Timsâh was then connected with the sea (see below).

As to no. 2, in the passage concerning Al-Ḳulzum quoted by Guthe³ from Al-Muḳaddasî⁴ (A.D. 988) it is stated that “Water is brought by ship, and other, of bad quality, comes on camels from a place that is distant one *barîd* (*i.e.* ‘two parasangs’ or ‘one station’) and is named Suwais.” Some remarks of Carsten Niebuhr⁵ will serve for commentary on this; he says that the inhabitants of Suès draw their water from Bîr Suès which lies nearest to them, from “the spring of Moses” and a spring called Naba. The last two, still named ʿIyân Mûsâ (عيون موسى) and *En-Nâba* (النابعا), lie on the east side of the Red Sea at a greater distance than Bîr es-Swês. The water of *all* these springs was bad, that of Bîr es-Swês the worst; but the last was fortified because it was the nearest⁶. I fixed the position of this well exactly at five kilometres north-east from Suez. By the Bedouin of the neighbourhood (El-Ḥawêtât) it is called Bîr el-Ḳizmil (بيير القزمل). Now Ḳizmil⁷ is certainly the old Al-Ḳulzum which would become El-Ḳilzim in the Bedouin dialects, and metathesis is very frequent in them, especially in words containing a liquid. The spring which is called Suwais and Bîr es-Swês respectively in the tenth century and by the present inhabitants of Suez can have obtained its Bedouin name Bîr el-Ḳizmil only because Al-Ḳulzum=Es-Swês.

This is confirmed by Linant-Bey’s map⁸, where Tell es-Swês is named Tel el Glismel, and by the Tâğ al-ʿarûs⁹, the largest of the original Arabic lexicons, compiled about 1765

¹ *Die Landenge von Suès im Altertum in Zeitschrift des Deutschen Palästina-Vereins*, 1927, 67–92.

² *Geographisches Wörterbuch* (edit. WÜSTENFELD), II, 466.

³ *Op. cit.*, 70. ⁴ Edit. DE GOEJE, 195, 13–196, 8=Yâkût IV, 160, 23–161, 6.

⁵ *Reisebeschreibung nach Arabien und andern umliegenden Ländern*, Kopenhagen (1774), 220.

⁶ *Op. cit.*, 217.

⁷ Bîr el-Qizmil is marked on the map of Egypt, 1:250,000 South-east Delta, sheet 2-F, Survey Department, 1912, in which the whole route Cairo—Es-Swês is drawn from my survey.

⁸ *Mémoires sur les principaux travaux exécutés en Égypte*, Atlas, Pl. iii, “Carte de l’Isthme de Suez tel qu’il était en 1858.”

⁹ Vol. IX, 32, 18.

from various sources, where we read "They say Al-Ḳulzum was a city in the east of Egypt near the mountain *At-Târ*, which has long lain in ruins, and in its place another locality has been built which is named As-Suwais."

In any case the name As-Suwais did not exist in the fourteenth century as a designation of the *city*; for Ibn Duḳmâk¹ († 1391) gives an exact description of Al-Ḳulzum lying at the end of the western, as Ailah did of the eastern, of the two "arms" of the Red Sea which stretched into the land, but without mentioning the name As-Suwais.

The name *Danab at-Timsâh* (ذَنبُ التِمْسَاحِ) is already to be found in El-Mas'ûdî († 956)², who writes of the canal which a king wished to dig through the isthmus, but was obliged to give up on account of the high level of the Red Sea: "and the place which he dredged out on the sea of *Al-Ḳulzum* is known as *Danab at-Timsâh*, 'The Tail of the Crocodile,' and is a mile from the town of al-Ḳulzum."

Ibn Duḳmâk says³: "Amr ibn al-ʿÂṣî wished to cut through the land between the Sea of Ar-Rûm (Mediterranean) and the sea of *Al-Ḳulzum*, a matter of sixty miles, at a spot (or place) which is called *Danab at-Timsâh*, but ʿOmar al-Khaṭṭâb prevented him...." This passage, which is taken from Ibn Saʿîd († 1274), is also to be found in Abu 'l-fidâ⁴.

There can hardly be a doubt that the perplexing name *Birkat et-Timsâh* is derived from the *Danab at-Timsâh* at a time when the connexion with the Red Sea was broken and the name "Crocodile's Tail" had no longer any meaning. I consider that the name, apart from several other reasons, is proof that the Red Sea in Arab times still reached to the *Birkat et-Timsâh*.

I should like to criticize three more of Guthe's statements, in regard to the *Tabula Peutingeriana*:

1. On p. 78 he states that after Clisma the road-line has a hook downwards, thus

Clisma XL

and that "the number after Clisma belongs to the preceding piece." That is impossible. There is no trace of such a hook on the photograph (Fig. 1). What is visible after XL is a dot or the remains of an X; if it is the latter XIX must be read instead of XL.

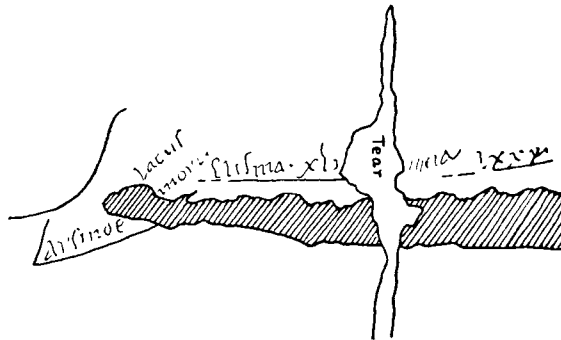


Fig. 1.

2. On p. 76 he states that the *Tabula Peutingeriana* pictures the conditions of the fourth century A.D. That is not correct. The period of the *Tabula* is best defined by

¹ See his *Description de l'Égypte* (Le Caire, 1893), v, 53-54.

² *Les Prairies d'Or*, iv, 97.

³ *Op. cit.*, v, 53, line 11 from below.

⁴ *Géographie d'Aboulféda*, traduite.....par M. REINAUD, II, I, 146.

Kubitschek in his very valuable article "Karten" in Pauly-Wissowa's *Real-Encyclopädie*¹. He places the composition of the originals of the *Tabula* and of the *Itinerarium Antonini* which is related to it in the time of the Emperor Caracalla (211-217).

3. When Guthe makes use of the drawing of the sea to support his assertions, he shows that he has not read W. Kubitschek's *Itinerarstudien*², where it is proved that the courses of the rivers, many parts of the sea, and the lakes were added to the Itinerary at a later date, and generally incorrectly.

¹ Vol. x (1919), pp. 2117 ff.

² *Denkschriften der Wiener Akademie*, LXI, 3, Vienna, 1919, especially pp. 7-64.

A RAMESSIDE ROYAL STATUE FROM PALESTINE

BY H. R. HALL

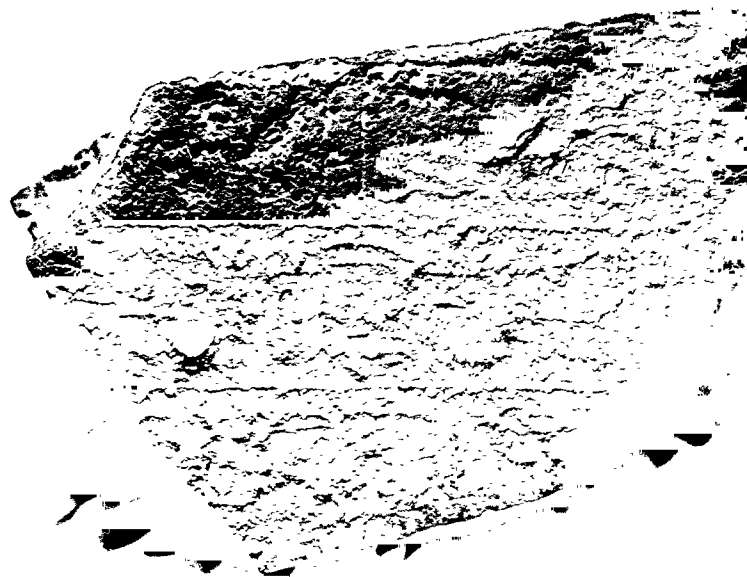
With Pl. xxix, fig. 1.

The upper part of an Egyptian royal statue illustrated in Plate xxix, fig. 1 was found recently either in Palestine or Syria, more probably the former (the precise locality is uncertain), and is now in the British Museum (No. 118544). It is of the usual Egyptian alabaster or calcite, and on it there are extensive traces of the original painting. As can be seen in the photograph, the head has the short round wig very common on royal figures of the Nineteenth Dynasty and later. The uraeus is broken away, and the face damaged, the nose and mouth being considerably knocked about. At the back is a rectangular plinth.

There is no inscription on the figure, no cartouche either on the plinth or on the upper arms, to tell us the precise identity of the king represented; but there seems to be little doubt that it is intended for Ramesses II or possibly for Meneptah. It is of course a purely conventional official figure, without pretence to being a real portrait; but from the analogy of other royal statues I should guess this to be meant for Ramesses II or his son, possibly, though not so probably, for Ramesses III, judging by the style. It is an interesting example of the official royal portrait, set up in some town of Palestine as a mark of the Egyptian imperium, as it might be at Bethshan or at Megiddo or Gaza. It is $9\frac{1}{2}$ ins. (24 cm.) high.



1.



2.

1. Alabaster Statue from Palestine or Syria. *Scale* $\frac{1}{12}$
2. Fragment of a Stela from Tell el-'Orcimeh. *Scale* $c. 1$

A ROYAL STELE OF THE NEW EMPIRE FROM GALILEE

BY W. F. ALBRIGHT AND ALAN ROWE

With Pl. xxix, fig. 2.

One of the most unexpected features of recent Palestinian archaeology is the rapid increase in the number of Egyptian royal inscriptions from a land supposedly poor in epigraphic monuments of the Bronze and Early Iron Ages. In this paper we publish a fragment of a coarse basalt stele accidentally discovered on Tell el-'Oreimeh in January, 1928, by the Rev. Charles T. Bridgeman of St. George's Close, Jerusalem. Mr. Bridgeman has kindly given us permission to publish it, for which we wish to thank him most heartily.

Our fragment is about 27 by 18 cm. and 16 cm. thick. Fig. 1 and Pl. xxix, fig. 2. It was broken in antiquity and re-used as a door-socket, as shown by the rounded edge

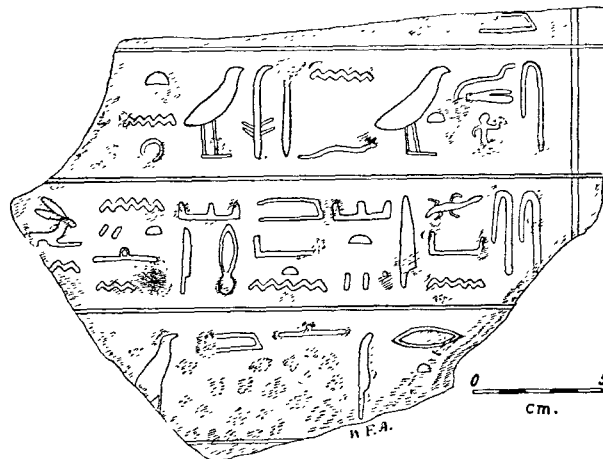


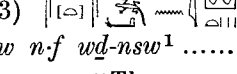
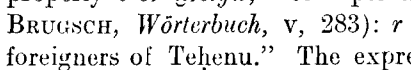
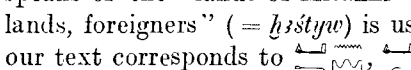
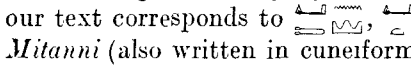
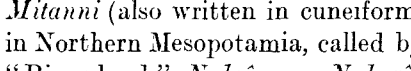
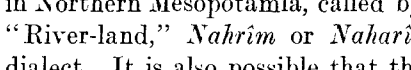








Fig. 1.

of the socket cavity, originally some 12.5 cm. in diameter, at the upper left-hand corner of the face. The absence of wear around the edge of the socket suggests that it only served a short time in this capacity, after which it was broken again, and one fragment rolled about a third of the way down the hill, where Mr. Bridgeman found it. That it cannot have been carried here from another site is shown by the following considerations. There are no other Bronze Age mounds less than five miles away, and the nearest mound occupied during the Late Bronze Age is *Ḳurûn Ḥaṭṭîn*, six and a half miles away in a straight line, but by road considerably farther. Since this region is full of blocks of lava (coarse basalt), there would be no object in such transportation, least of all to Tell el-'Oreimeh. Moreover, our fragment weighs about 25 kg., and cannot have been transported except for a short distance, and certainly not to a hill-top already strewn with blocks of basalt.

The text runs as follows: (2)  (3)  (4)  = *šdd-tw n-f wd-nsu*¹ *š[l?]* *ššš-n-y hšwt* (*hštyw?*)² *My-t-n my nty nn wn-[f?]* *irt-[n-]y* , "There was recited to him the royal decree I have repelled the foreigners of Mitanni (so that it has become) as one that never existed that which I have done (?)" Apparently the words of the third and fourth lines belong to the royal decree, which was couched in the first person. In this case *n-f*, "to him," refers to a royal envoy or district officer, who was commanded to erect the stele. For the expression *ššš hšwt*, properly *ššš hštyw*, "to repel the foreigners," cf. Pap. Harris, I, 57. 12, 58. 8 (see BRUGSCH, *Wörterbuch*, v, 283): *r ššš hštyw* () *Ty-h-nw*, "to repel the foreigners of Tehenu." The expression *my nty nn wn-[f?]* stands for classical Middle Egyptian *my nty n wn*; cf. the full discussion by GUNN, *Syntax*, 189-90, 122-3. Gunn cites the substitution of *my nty nn hpr-šn* (properly *my ntyw nn hpr-šn*) for the more correct *my nty n hpr* in later copies of the Song of the Harper.

A clue to the date of our inscription is provided by the reference to Mitanni in l. 3. Nearly all the allusions to this country under its native name *Mitanni* occur in the inscriptions of Tuthmosis III. The passages where the name *Mtn* occurs have been collected by MÜLLER, *Asien und Europa*, 280 ff., and BURCHARDT, *Die altkanaanäischen Fremdworte*, No. 541. In two other passages (*Urkunden*, IV, 589, 931) Tuthmosis III speaks of the "lands of Mitanni" (*tyw My-t-n*)³; in our text the word *hšwt*, "foreign lands, foreigners" (= *hštyw*) is used instead of *tyw*, "lands." The spelling  of our text corresponds to , , and  in other inscriptions. *Mitanni* (also written in cuneiform *Mitani* and *Mittanni*) was the native name of a state in Northern Mesopotamia, called by the Assyrians *Hanigalbat*, and by the Semitic Syrians "River-land," *Nahrîm* or *Naharîm* in Canaanite, *Nahrîn* or *Naharîn* in the Amorite dialect. It is also possible that the dual *Naharêm*, etc., was used by the Syrians of the Bronze Age, just as *Naharaim* (in *Aram Naharaim*) was later by the Hebrews⁴. The cuneiform spelling *Nahrîma* in the Amarna Tablets reflects a Canaanite *Nahrîm* or *Nahrêm*, while the Egyptian orthographies *N-h-ry-n* and *N-hš-ry-nš*, etc., seem to reflect

¹ The upper part of the first character is damaged, so it is not certain whether it is  (as seems most likely), , or . The transposition of  and  is graphic. For  *wd*, "command," see ERMAN-GRAPOW, *Wörterbuch*, I, 396, col. c; for *wd nsu*, loc. cit.

² It is not quite clear whether *hšwt* is to be taken here in the sense of "inhabitants of foreign lands," as often, or whether we are actually to read *hštyw* as in the parallel passage from Pap. Harris cited below. The expression *ššš hšwt* may be due to contamination between the phrase *ššš hštyw*, "to repel the foreigners," and such expressions as *ššš tw My-t-n*, "to destroy the lands of Mitanni" (*Urk.*, IV, 931), and *ptpt hšwt*, which may mean either "to trample down foreign lands," or "to trample down foreign peoples." On a scarab found by Rowe at Beth-shan in 1927, Ramesses II is represented as smiting a Canaanite, while before the king is written *ptpt hšwt*, which here must mean "trader-down of foreigners."

³ Cf. also *Urk.*, IV, 616, in the Song of Triumph, where we have *tyw nw m My-t-n*, "the lands which are in Mitanni."

⁴ There is nothing strange in the use of the dual to denote the Land of the Two Rivers. Throughout the history of Mesopotamia we find the duality of the region watered by the two great rivers Tigris and Euphrates constantly emphasized. Šamsi-Adad I of Assyria, about 1850 B.C., calls himself "ruler (or the like) of the country between the Tigris and the Euphrates," and the subsequent kings of Mitanni, who controlled both upper river valleys, must have stressed the duality of their country in the same way.

the pronunciations *Nahrîn* and *Naharîn*¹. In view of our present knowledge concerning the history of Mesopotamia in the fifteenth and fourteenth centuries B.C., we can assert with confidence that *Nhrn* and *Mtn* are absolutely synonymous terms.

Recent discoveries have greatly increased our knowledge of Mitannian history in the fifteenth century B.C. About the middle of the century we find Sauššatar², the great-grandfather of Tušratta, ruling a kingdom which extended at its apogee from the Gulf of Issus to the Zagros Mountains. In the treaty between Mattiwaza of Mitanni and the Hittite king Subbiluliuma we are told that Sauššatar was the overlord of Assyria, and that he removed a gate of gold and silver (electrum) from its capital Assur. It is probably to this period that the stelae of officials mentioning service under the king of Ḫanigalbat, stelae discovered by Andrae at Assur, belong. The excavations carried on during the winter 1927-8 in the region of Kerkûk (Arrapha) by Chiera have proved that Sauššatar was also the overlord of Arrapha, south-east of the Lower Zab. The date of Sauššatar is fixed approximately by the fact that his son Artatama gave his daughter to Tuthmosis IV (Amarna-KNUDZON, No. 29. 16), while his grandson Šuttarna gave his daughter to Amenophis III. It follows that Artatama was probably contemporary with Amenophis II and Tuthmosis IV, while Sauššatar was probably contemporary with Tuthmosis III and Amenophis II, and may be dated approximately 1470-1440, or 1480-1440 if he had a long reign, as seems likely. It was, at all events, probably he with whom Tuthmosis III carried on the long conflict over the control of Northern Syria.

During the second campaign of Tuthmosis III (1477 B.C.)³, before there is any mention of a war with *Nhrn*, we find the land of Assur (Assyria) sending gifts to the Pharaoh, presumably in order to enlist his aid in the unequal conflict with Mitanni. Since there is no further allusion to the lands beyond the Euphrates until the eighth campaign (1468), it would seem that Tuthmosis was either too cautious to intervene, or had been worsted in making the attempt. The conquest of Assur by Sauššatar may then perhaps be dated in the decade between 1477 and 1468. In the latter year the Egyptians again invaded *Nhrn*, but the official account of the campaign (*Urkunden*, IV, 697) is so chary of details that the expedition can hardly have been very successful. However, the prince of *Sngr*, which corresponds to cuneiform Šanḫar, south-east of the Khabûr⁴, sent

¹ One of the writers (W. F. A.) is now convinced that the syllabic orthography of the Eighteenth Dynasty was a serious effort to reproduce the vowels intelligibly, as always believed by Max Müller. Thanks to our new knowledge of the Egyptian vocalization at this time, as well as to a much more intensive study of the West-Semitic dialects of the second millennium B.C., it is possible to eliminate nearly all the remaining difficulties.

² Since we do not yet know the exact character of the Mitannian sibilants, it is safer to give them their conventional cuneiform transcription. The Hittites are known to have used *š* for *s*, following the North Mesopotamian orthography, but they did not possess a *sh* at all, while the Mitannians may have ; see *Journal*, XI, 20, n. 1. It is likely that *Sauššatar*, for example, was actually pronounced *Šoussatar*; cf. *Journal*, XII, 187.

³ The chronology follows the generally accepted system of Meyer, based on the view that the new moon dates given by Tuthmosis III are to be reckoned from the first appearance of the moon, and not from its astronomical conjunction, as held by Mahler, and more recently by SETHE, *Gott. Ges. d. Wiss., Phil.-hist. Klasse*, 1919, 289.

⁴ For the situation of Šanḫar (pronounced approximately *Shanḫar*) see *Am. Jour. Sem. Lang.*, XL, 125 ff.; *Jour. Soc. Or. Res.*, x, 256-7. *Sngr* corresponds to the modern Djebel Sindjâr, in the heart of Northern Mesopotamia, a district notable both for the abundance of its water and for its natural strength. The Khabûr valley and the region of Ḫana also formed part of this state at one time.

gifts, evidently as a bid for assistance against Mitanni. The next mention of *Nhrn* is in the tenth campaign (1466), when the Egyptians won a victory over the Mitannians near a town called *Iryn*. When, however, we compare the 180 horses and 60 chariots captured in this battle with the 2238 horses and 924 chariots listed among the booty taken at Megiddo, it becomes clear that the victory cannot be called sweeping. We do not know whether it was followed up, since the accounts of the two following campaigns are lost. It is quite possible that there was a more violent collision between Egypt and Mitanni at this time. Some details of the war with Mitanni, unhappily not dated, are given in the biography of Amenemḥab (*Urkunden*, iv, 890 ff.), from which we learn that Ḥalab (Aleppo) and Carchemish then formed part of the Mitannian empire, which probably extended as far as the Mediterranean. Tuthmosis III erected a stele east of the Euphrates, and the great list of places captured by him appears to include the names of some towns in north-western Mesopotamia, but his permanent conquests were probably all west of the Euphrates. It is, in fact, possible that Tuthmosis III was only able to defend the frontiers established by the Pharaohs of the sixteenth century. During the latter part of his reign the struggle with Mitanni continued actively. During the thirteenth campaign (1463), the state of Arrapha sent gifts to the Pharaoh, a fact which becomes important when we realize that Arrapha was then a province of Mitanni. The prince of Arrapha, who resided in Kerkūk¹, evidently was just as desirous of shaking off the hated Mitannian yoke as his neighbour of Assyria. There can be no possible doubt that Tuthmosis III did everything possible to stir up the spirit of revolt in Mitanni. On the other hand, the Mitannians endeavoured with greater success, it would appear, to instigate rebellion in Syria. About 1460 the native states of Central Syria revolted, led by the princes of Kadesh and Tunip, against whom the last campaign of Tuthmosis III, in 1459, was directed. It is characteristic of the situation that we find a body of Mitannian auxiliaries with the Syrian army.

It is probable that the war with Mitanni was continued after the death of Tuthmosis III. A text of Amenophis II from Karnak tells us: "The chiefs of Mitanni come to him, their tribute upon their backs, to beseech his majesty, etc." (BREASTED, II, 317). We may safely suppose that these "chiefs of Mitanni" are the princes of *Sngr*, Assur, and Arrapha, as well as of the other tributary states of Mitanni, who desired Egyptian help in throwing off the yoke of Sauššatar or his son Artatama. It is most unfortunate that we know practically nothing about the foreign wars of Amenophis II, during his long reign of twenty-six years, but we are justified in concluding that relations were hostile, since the first campaign of Tuthmosis IV (c. 1420) was directed against *Nhrn*, though no details of the conflict are given. That the Pharaoh's rather grandiloquent claims are exaggerated appears from the fact that he married the daughter of Artatama, though we need not take the statement of Tušratta very seriously, that the Egyptian king was obliged to send seven deputations to Mitanni before the marriage was granted. The reason for the rapprochement is evidently that Hittite power was beginning to appear as a menacing cloud on the horizon. It was about this time, in all probability, that Tudḥalias I, the father of Subbiluliuma, conquered Aleppo, after defeating the men of that place, who were assisted by a contingent from Ḥanigalbat (the regular Assyro-Babylonian name of Mitanni). The fact that a Mitannian army was sent to the aid of

¹ The ancient capital Arrapha is now known to have been located at the great mound on which the old city of Kerkūk is built; cf. CONTENAC, *Babyloniaca*, ix, 83-6; ALBRIGHT, *Journ. Am. Or. Soc.*, xlv, 211, xlvi, 225; GADD, *Rec. d'Assyr.*, 1926, 84.

Aleppo proves that Aleppo had fallen once more into the hands of the Mitannians, perhaps in the time of Amenophis II. The Hittite menace continued to be serious during the reign of Hattusilis II and especially during that of Subbiluliuma, the latter's successor. Hostilities therefore ceased between Egypt and Mitanni, and a treaty was cemented by the marriage of Amenophis III and Giluhepa, daughter of Šuttarna, king of Mitanni, a marriage celebrated with great éclat. So far as we know, Egypt and Mitanni continued to be allies down to the subjugation of Mitanni by Subbiluliuma, to whom the latter became tributary about 1350 or shortly before. Curiously enough we hear nothing further from Hittite sources about Mitanni, which was partially conquered by Assyria in the reign of Adad-nirâri I, about 1300 B.C., and finally ceased to exist after the crushing defeat of Šattuara and his Hittite allies by Shalmaneser I, early in the thirteenth century.

In the light of the preceding sketch of Mitannian history, we may ascribe our text to the reign of Tuthmosis III, after the eighth campaign (1468 B.C.). The expression, "I have repelled the foreigners of Mitanni," belongs to the early stage of hostile relations between Egypt and Mitanni, before the victories which were claimed by Amenophis II. A later date is hardly possible, since a vague claim of supremacy is all that we find in inscriptions of Amenophis III, the ally of Mitanni. A still later date is absolutely impossible, unless we assume a deliberate copying from an older text. The language of our fragment does not exhibit any characteristically New Egyptian forms or spelling. It may also be noted that the stele of Tell el-'Oreimeh was smaller than the Nineteenth Dynasty stelae of Beth-shan. The two smaller stelae, from the reign of Sethos I, have a thickness of c. 24-32 and 30-32 cm. respectively, while the width of the lines is 6 and 7 cm. respectively. The stele to which our fragment belongs was about 16 cm. thick at this point, and the lines are only 5 cm. wide.

It is practically certain that Tell el-'Oreimeh represents the ancient Canaanite and Israelite town of Chinnereth or Chinnaroth, from which the Sea of Galilee received its ancient biblical name. This identification, which was proposed independently by Dalman and Albright¹, is now accepted by most topographers. Quite aside from the indications of our documentary sources is the simple fact that there is no other possible site on the Sea of Galilee, archaeologically considered, while Tell el-'Oreimeh is suitable in every way. Some soundings were made on the site of the acropolis by Karge, shortly before the war². From these trial excavations and other explorations a considerable quantity of pottery, bronze weapons, and other objects were recovered, dating from the end of the Bronze Age and the beginning of the Iron. During the Early Iron I (c. 1200-900) only the acropolis was occupied, but in the preceding Late Bronze (c. 1600-1200) the entire summit of the hill which rises above the German hospice at Tâbghah seems to have been within the walls.

In 1925 Mr. Bridgeman found here a thick potsherd containing the incised representation of a stag, published in *Jour. Pal. Or. Soc.*, vi, 167-8. On closer examination this sherd now proves to belong to a cult object like the ones found in abundance at Beth-shan. It is part of the top portion of a cylindrical stand of pottery, open at the top and bottom, with circular holes in its sides, one of which is still partly visible. Similar cylindrical cult-stands occur at Beth-shan in all the Canaanite temples from Tuthmosis III to Ramesses II (c. 1500-1200 B.C.), after which they seem to disappear.

¹ DALMAN, *Orte und Wege*, 3rd ed., 140; ALBRIGHT, *Annual Am. Sch. Or. Res.*, vi, 24-6.

² *Rephaim*, 1918, 172 ff.

The sherd from Tell el-'Oreimeh is practically identical in technique with the Beth-shan specimens from the time of Ramesses II, that is, from the last century of the Late Bronze. The technique is rather better than that of the specimens from the fifteenth and fourteenth centuries.

It may be more than a coincidence that the only mention of Chinnereth in Egyptian sources is found in the Tuthmosis List, No. 34, where it occurs after Lawis (= Heb. Layiš, Tell el-Ḳâḏi), Ḥaṣôr (Tell el-Ḳedah)¹, and Paḥel (Tell Faḥil)², though a more correct geographical order would be Lawis, Ḥaṣôr, Kinnarôt, Paḥel, in north-south sequence. The spelling *K-n-nj-rj-tw* seems to indicate the pronunciation *Kennarât*^c, which might reflect an Amorite *Kinnarât*, corresponding to Canaanite-Hebrew *Kinnarôt*. At all events, the discovery of this fragment on Tell el-'Oreimeh will in all probability commend the identification of the latter with Chinnereth to scholars who are not in a position to control the topographical and archaeological questions involved.

In concluding this paper it may be of interest to give a list of the Egyptian royal stelae and monuments inscribed with royal names of the New Empire (Eighteenth-Twentieth Dynasties) which have been discovered hitherto in Palestine and Syria. This list will not include any of the numerous scarabs of the New Empire found in the excavations, nor small inscribed objects, like the portable sun-dial of Menephtes, found at Gezer. Nor does it include any of the inscriptions of the New Empire without royal associations, such as the famous Mekal stele of Beth-shan. A complete list of all the Egyptian inscriptions of the Old Empire, Middle Empire, Hyksos period, New Empire, and the subsequent age (tenth-fourth centuries) discovered so far in Palestine and Syria would run into many hundreds of numbers.

1. Fragment of a relief with the name of Tuthmosis III found at Byblos and published by WOOLLEY and GUNN, *Journal*, VII, 200 f.
2. Fragment from Tell el-'Oreimeh, probably belonging to Tuthmosis III.
3. Beth-shan stele from first year of Sethos I, found by Fisher in 1923, published in *Museum Journal*, 1923, 244, with an account of the text on p. 232. A full discussion is given by MORET, *Revue de l'Égypte Ancienne*, I, 18-30 (the topographical treatment is unreliable), and a translation of part of the text is also given by RANKE, *Altorientalische Texte und Bilder*, I, 95. For the topography see further ALBRIGHT, *Annual Am. Sch. Or. Res.*, VI, 32 ff.
4. Beth-shan stele of Sethos I (year lost) from Beth-shan, found by Fisher in 1921; see *Museum Journal*, 1923, 6 f.
5. Stele of Sethos I (only upper part preserved) discovered by G. A. Smith at Tell-esh-Shihâb (*Quart. State.*, 1901, 347 ff.; cf. VINCENT, *Canaan*, 451-2).
6. Stele of Sethos I (upper part only), found by Pézard at Tell Nebi Mendu (Kadesh on the Orontes) in 1921 (*Syria*, 1922, 108; *Fond. Piot, Monuments et Mémoires*, xxv, 387-9), and published by LOUKIANOFF, *Ancient Egypt*, 1924, 101-8.
7. Stele of Ramesses II at Shêkh Sa'd (Karnaim, Carnium). This is the famous Job Stone, published by ERMAN, *Zeitschr. f. äg. Spr.*, xxxi, 100 ff. For the reading of the divine name as *Adôn-ṣaphôn* cf. ALBRIGHT, *Annual Am. Sch. Or. Res.*, VI, 45, n. 104.
8. Beth-shan stele from ninth year of Ramesses II, found by Fisher in 1923, and published *Museum Journal*, 1923, 245, with description on p. 234. Now at Philadelphia.

¹ For this brilliant identification see GARSTANG, *Ann. Arch. Anthr.*, XIV, 35-42.

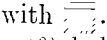

² *Phl*, Roman Pella, is also mentioned in the new Sethos stele of Beth-shan, from the first year of the king.

9. Stele of Ramesses II found at Byblos just before the war, and now in four fragments; see MONTET, *Fond. Piot, etc.*, xxv, 237.

10. Northern relief of Ramesses II at Nahr el-Kelb, date lost.

11. Central relief of Ramesses II at Nahr el-Kelb, fourth year.

12. Southern relief of Ramesses II at Nahr el-Kelb, tenth year. These reliefs are now conveniently described by WEISSBACH, *Die Denkmäler und Inschriften an der Mündung des Nahr el-Kelb*, 1922, 17-22.

13. Fragment of a fourth stele found by Rowe in the Northern Temple of Ramesses II at Beth-shan in 1925. Only the ends of the text of two lines are visible; the upper line ends with  and the lower one with .

14. Part of the statue of a king (?) holding a staff in either hand, very similar in appearance to a statue of Menephtes in the Cairo Museum, and to a statue of Khaemwese, son of Ramesses II, in the British Museum: this statue was found by Rowe in the Northern Temple of Ramesses II at Beth-shan in 1925.

15. Fragmentary relief found by Virolleaud at Byblos (MONTET, *loc. cit.*; WOOLLEY, *Journal*, vii, 200). The style is apparently that of the Nineteenth Dynasty. A Pharaoh is represented as kneeling before a god and a goddess, called "Lady of Byblös."

16. Statue of Ramesses III found by Fisher at Beth-shan in 1923, with the royal cartouches inscribed on its shoulders.

It will be seen that there is every hope of finding many more royal inscriptions as excavations continue in Palestine. The number of stelae and tablets erected in the Asiatic provinces of Egypt during the New Empire alone must have been prodigious. Royal stelae were erected even in comparatively unimportant places like Chinnereth and Karnaim. Garrison towns like Beth-shan must have contained quantities of royal and private inscriptions. The great mounds of Gaza, once the capital of the Egyptian province of Palestine¹, and Hazor, the metropolis of Galilee in the Late Bronze Age, as well as the much smaller mound of Megiddo, must contain nearly complete series of royal monuments. Just as explorations and excavations in Nubia have disclosed monuments recording the wars of the Pharaohs in Nubia during the Middle and New Empires, and giving information regarding all phases of Egyptian administration in Nubia during the New Empire, so excavations in Palestine will certainly yield a vast amount of material bearing on the history of the Egyptian Empire in Asia. The remarkable discoveries at Beth-shan and the fragment of a stele of Shishak found by Fisher at Megiddo are only an earnest of what is to come. It is, therefore, eminently fitting that two of the greatest Egyptologists of to-day, Professor J. H. Breasted and Sir William Flinders Petrie, have recently organized great archaeological expeditions in Palestine. We may be confident that their faith will be richly rewarded.

POSTSCRIPT: Two additional references to Chinnereth appear in scribal lists from the reign of Tuthmosis III (*cf.* MÜLLER, *O.L.Z.*, 1914, 103 f.).

¹ Cf. *Zeitschr. f. äg. Spr.*, LXII, 64.

THREE PTOLEMAIC PAPYRI

By C. C. EDGAR

The three documents discussed below consist of a business letter, a legal petition and a royal order. They have little in common, but I have grouped them together because each of them in its own way forms a link between the Petrie papyri and the Zenon papyri. These two groups, belonging as they do to the same period and the same province, have naturally many points of contact, and Rostovtzeff has already shown how effectively they can be used to illustrate and supplement each other.

No. 1.

The papyrus re-edited below is one of the letters addressed to Kleon the chief engineer. It was first published by Mahaffy in *P. Petrie*, II, 13 (11) and is now in the British Museum (No. DXXXIX). Though the text was revised and amended by Smyly and by Wilcken (*P. Petr.*, III, 42 A and p. xv), it has remained till now a barely intelligible fragment. One could see that what the editors read as [...]χεν was probably to be restored as ἡ πῆχυν; but the αὐτῆς in l. 2 postulated the previous mention of a διῶρυξ, and yet there seemed to be no room for such a word in the preceding lacuna.

In order to clear up this difficulty, Mr. Bell kindly had the papyrus detached from its old mount. We then saw that it consisted of two pieces which had been stuck together, either accidentally or mistakenly, in such a way that the ends overlapped; and it became clear that the lacunae were much longer than Mahaffy had supposed. The supplements in the following transcript seem to be of the right length and to give the sense required by the context. Kleon's docket on the verso is illegible except for the number κδ, which shows that the letter was received the day after it was written.

*Ζήνων Κλέωνι χαίρειν. τὸ ὕδωρ τὸ ἐ[ν τῇ διῶρυγι οὐκ ἀνα]βέβη[κ]εν πλείω ἢ [πῆ]χυν,
ὥστε μὴ δύνασθαι ἀπ' αὐτῆς ποτίζε[σθαι τὴν γῆν. καλῶς ἀν ο]ἷν π[ο]ήσαις ἀνοίξας
τὰς θύρας, ἵνα ποτίζηται ἡ γῆ.*

ἔρ[ρωσο. L]κη, Μεσορῆ κγ.

Verso:

L κη, Μεσορῆ κδ.

.....φν.....υδ...

...[

Κλέωνι.

Translation: "Zenon to Kleon greeting. The water in the canal has not risen more than a cubit, so that the land cannot be irrigated from it. Please then open the sluice-gates in order that the land may be irrigated. Farewell. Year 28, Mesore 23."

The author of the letter writes like a person of some authority, and we are tempted to identify him with Zenon the confidential agent of Apollonios the *διοικητες* and to regard the land of which he speaks as the great *δωρεά* at Philadelphia. It is true that Zenon did not settle down in Philadelphia till the end of year 29. We know, however, that he visited the Fayyûm along with Apollonios in year 28 and that their party was in Krokodilopolis about the 1st of Thoth, or within a fortnight of the date of the letter (see *P. Cairo Zen.* 59087); and we may certainly assume that they inspected the estate and gave instructions about the work to be done there. It seems highly probable then that the present letter

was written by Zenon during or after a visit to Philadelphia. Moreover we know of no other person of that name important enough to have sent such a request to the chief engineer.

It may be objected that the letter is not in Zenon's usual hand and that it is dated by the Egyptian month, whereas at this period he was accustomed to use the Macedonian calendar. But in fact his other letters are not all in one and the same hand, and it is certain that he often employed a scribe. There is nothing unreasonable in the assumption that he dictated the present letter to a local scribe, leaving him to date it by the calendar which the Greeks domiciled in the interior of Egypt had already adopted.

No. 2.

This is a formal petition to the king, of the type which the Magdola papyri have made so familiar. We may reconstruct the case somewhat as follows. The complainant Attalos had brought an action against Apollonia for the recovery of forty-three drachmas, and a certain Apollonios, a horse-breaker, perhaps the lady's brother, had become surety for her, undertaking to produce her in court by a certain date or, failing that, to pay the sum claimed himself. See the introduction to No. 3. In the event of Apollonios not fulfilling his contract the *πράκτωρ ιδιωτικῶν* had been ordered by Serambos, the local representative of Aristomachos, to exact the money from Apollonios. The *πράκτωρ* had failed to do this, and now Attalos asks the king to order Aphthonetos the *στρατηγός* to write to Serambos bidding him exact from the *πράκτωρ* and hand over to the plaintiff three times the amount claimed from Apollonios in accordance with the edict. A similar provision of the same edict is referred to in *P. Hib.* 34, 9, in which an *ἀρχιφυλακίτης* who prevented an execution is said to be liable for three times the amount of the debt: and no doubt all State officials who failed to carry out their duties with regard to the recovery of private debts were threatened with the same penalty.

Aphthonetos mentioned in l. 7 appears in the Petrie papyri, vol. II, 12 and vol. III, 29, as strategos in year 6 of Ptolemy III and again (for there is little doubt that it is the same person) in a document of year 19 (*P. Petr.*, III, 25). The petitions addressed to him prove that he was the governor of a district and not a purely military commander. From the present text and from *P. Petr.*, II, 12, in which he writes to Agenor about the owners of *σταθμοί* in Krokodilopolis, one might suppose him to have been strategos of the Arsinoite nome. But that is not possible. The Zenon papyri show quite clearly that from at least year 36 of Ptolemy II to at least year 7 of Ptolemy III the Arsinoite strategos was Agenor. We must therefore conclude that Aphthonetos belonged to another district, perhaps the Herakleopolite. The fact that we have several petitions addressed to him among the Petrie papyri does not invalidate this argument; for Gurob, where the papyri were found, lies midway between the two nome-capitals, and it is only natural that the material used for making the cartonnage should have come from the south as well as from the north. Besides Aphthonetos, another strategos called Aristomachos appears in the petition (whether the words *καθεσταμένου στρατηγού* go with *Ἀριστομάχου* or with *Σηράμβου*), and he too, unless I am mistaken, is not altogether unknown to us. For he is probably the colleague to whom Aphthonetos writes in *P. Petr.*, III, 29 (*i*) and probably also the strategos of the Arsinoite nome mentioned in *P. Gurob.* 2, 7, which dates from year 21 of Ptolemy III. If these identifications are right, Aristomachos succeeded Agenor as strategos of the Arsinoite nome sometime after year 7 of Ptolemy III and continued in office till year 21 or later, after which he was himself succeeded by Diophanes (*P. Magd.*, *passim*). According to this theory

the strategos of a nome in early Ptolemaic times held office for a much longer period than in Roman times; for Agenor the fact is certain, for Aphthonetos nearly certain, and for Aristomachos highly probable. For though the present text might be as late as year 20, its date is more probably nearer to that of the bulk of Zenon's correspondence, among which it seems to have been found; I would therefore place it not long after year 7, the latest in which we find a mention of Agenor.

It may be asked how, if Aphthonetos was not the Arsinoite strategos, the petition should have found its way to Philadelphia in the Fayyûm. The probable solution of this difficulty is that the petitioner belonged to the district of Aphthonetos and therefore sought redress through his own strategos, while the defendants were domiciled at Philadelphia, where the exaction of the money would be entrusted to the local agent of the Arsinoite strategos. A Serambos appears in *P. Petr.*, II, 18 and *P. Gurob*, 9 as owner of a κλήρος in the Ἡρακλείδου μερίς and, as the name is not common, may possibly be the agent mentioned in our text.

The left half of the papyrus is in the Cairo Museum (*Journal d'entrée*, 48937) and the right half in the Michigan collection (*Invent.* 3138); when complete it measured about 13 × 29 cm. This is a case in which the dispersal of the fragments is of little consequence; the text could not be clearer if the two halves were again joined together. Unfortunately it is not always such a simple matter to identify and combine the separate pieces of a document, especially if they happen to be distributed over three continents.

Βασιλεῖ Πτολεμαίωι χαίρειν Ἀτταλος. ἀδικούμαι ὑπὸ Πτολεμαίω[υ μεί]ρους τοῦ Πτο-
λεμαίου πράκτορος ἰδιωτικῶν.
γράφαντος γὰρ Σηράμβου τοῦ παρὰ Ἀριστομάχου καθεσταμένου στρ[ατηγ]οῦ πρόσταγμα
Πτολεμαίωι, ἐπειδὴ Ἀπολλώνιος
οὐδ' ἔτι καὶ νῦν καθέστηκεν Ἀπολλωνίαν, ἐὰμ μὴ ἔτι καὶ νῦν καταστήσῃ ἐν ἡμέραις ἰ,
εἰσπράξαντα Ἀπολλώνιον πωλοδασμαστὴν † μγ ἀποδοῦναί μοι, καὶ λαβῶν τὸ πρόσταγμα
καὶ τοῦ Ἀπολλωνίου
5 οὐ καθεστηκότος τὴν Ἀπολλωνίαν καὶ ἐξελθουσῶν τῶν ἡμερῶν καὶ ἄλλου πλείω ἐπιγενο-
μένου χρόνου
ἀπαιτούμενος ὑπὸ μου τὰς μγ † οὐκ ἀποδίδωσι. δέομαι οὖν σου, εἴ σοι δοκεῖ, μὴ περιίδῃς
με ἀδικηθέντα ὑπ' αὐτοῦ,
ἀλλὰ προστάξαι Ἀφθονήτω[ι τῶι] στρατηγῶι γράψαι Σηράμβωι, ἂν ᾗ ἀληθῆ, εἰσπρά-
ξαντα Πτολεμαίωι τριπλὴν τὴν
πρᾶξιν κατὰ τὸ διάγραμμα † ρκθ ἀποδοῦναί μοι, καὶ ὦ διὰ σέ τοῦ δικαίου τετευχῶς.
εὐτύχει.

3. There is an empty space before καὶ νῦν καταστήσῃ.
4. εἰσπράξαντα: ξα above the line over a deleted letter.
6. οὐκ ἀποδίδωσι: added above the line.
7. ἂν ᾗ ἀληθῆ: added above the line.
8. μοι is not quite certain, but it does not seem possible to read ἴνα or ὅπως and more-
over the phrase καὶ ὦ...τετευχῶς without a preceding conjunction seems to have been
regularly used in such petitions (cf. *P. Cairo Zen.* 59351).

Translation: "To King Ptolemy greeting from Attalos. I am being wronged by Ptolemaios the younger, son of Ptolemaios, exactor of private debts. For Serambos agent of Aristomachos, who holds the post of strategos, having written an order to Ptolemaios to the effect that, since Apollonios had not even till then produced Apollonia, if he did not even now produce her within ten days, Ptolemaios was to exact from Apollonios the horse-

breaker forty-three drachmas and pay them back to me; though he received the order and though Apollonios has not produced Apollonia and the days have expired and a further period has gone by, in spite of my requests he does not attempt to pay me back the forty-three drachmas. I therefore beg you, if it seems good to you, not to overlook the wrong which he has done me, but to order Aphthonetos the strategos to write to Serambos that, if the above be true, he is to exact from Ptolemaios in accordance with the edict three times the amount of the claim and pay to me one hundred and twenty-nine drachmas; and so by your help may I obtain justice. May you prosper."

No. 3.

This text, which also belongs to the Michigan collection (*Invent.* 3106), is a royal order headed by the usual formula βασιλέως προστάξαντος. It is written in clear characters across the fibres, and the papyrus, which measures 23 12·5 cm., is folded horizontally. Starting from a particular case which had been submitted to him, the king decrees that whoever becomes surety for the appearance of another person by a certain date shall be released from his bond if he produces the body of the defendant even after the appointed term. The surety usually bound himself, by contract with the plaintiff, to produce the defendant within a given time or else pay the sum claimed (e.g., *P. Cairo Zen.* 59323), while in *P. Hib.* 93 he makes himself liable for the additional charges of τὰ ἐπιδέκατα καὶ τὰ γινόμενα. The language of the present decree is somewhat ambiguous, for τὸ σῶμα might mean "the person" (as in *P. Hib.* 34, 8) or "the corpse" of the defendant, whose death had prevented the surety from fulfilling his contract; but the latter meaning seems more probable and makes the appeal to the king more intelligible.

The heading adds that the royal order was communicated to Zenon by Aischylos agent of Sostratos. This Sostratos is probably to be distinguished from Zenon's friend of the same name with whom he shared a vineyard and with whom he had many common interests at Philadelphia. But without doubt he is the Sostratos who writes to Zenon from Alexandria in year 28 of Ptolemy II, asking him to give some help to his friend Aischylos (*P. Mich.* 3107, unpublished); the appearance of Aischylos in both texts makes this evident. Further, in *P. Petr.*, III, 20, col. 4 and verso, col. 1 we have two other decrees of the same nature, dating from between year 16 of Ptolemy II and year 2 of Ptolemy III, one of which is officially delivered by Theon παρὰ Σωστράτου and the other by Diodoros (?) παρὰ Σωστράτου. This is evidently the Sostratos of our text, while the occurrence of his name in the heading of these three documents shows that he had something to do with the publication of the royal προστάγματα. Now a fragmentary letter composed of *P.S.I.* 505 and a smaller scrap in the British Museum speaks of a certain Ἰάτωνος τοῦ ἐπὶ τῶν προσταγμάτων in year 29, and it seems to me probable that Sostratos was the successor of this man in the office denoted by the above title. Though the date of the two decrees in *P. Petr.*, III, 20 is not quite certain, Smyly remarks with reason that they should perhaps be assigned to the first or second year of Euergetes, which would accord very well with the above suggestion. The ἐπὶ τῶν προσταγμάτων was a Court official, like the ἐπιστολογράφος and the ὑπομνηματογράφος; probably he had to draft the προστάγματα in accordance with the king's instructions and then submit the draft for approval, as described in the Epistle of Aristetas, 26¹; and another of his duties was to see that the orders were delivered to the persons concerned by one of his agents, as we see from the headings of the three documents.

¹ εἰσδοθέντος δὲ τοῦ προστάγματος, ὅπως ἐπαναγνωσθῆι τῶι βασιλεῖ, τὰ ἄλλα πάντ' ἔχοντος πλὴν τοῦ "καὶ εἴ τινας προῆσαν ἢ καὶ μετὰ ταῦτα εἰσηγμένοι τῶν τοιούτων," αὐτὸς τοῦτο ὁ βασιλεὺς προσέθηκε μεγαλομερεῖα καὶ μεγαλοψυχία χρησάμενος.

The present text is dated year 10, Audnaios, no doubt the date on which the order was drawn up. As it was bought with a large lot of Zenon papyri, we cannot doubt that Ζήνωνι in l. 3 is the Zenon of the correspondence. And if, as presumably was the case, the order was communicated to Zenon shortly after being drawn up, year 10 must refer to the reign of Ptolemy III, for the correspondence does not go back beyond year 25 of the previous reign, nor is it at all probable that Sostratos was in office in year 10 of Ptolemy II. It might perhaps be maintained that what we have here is a copy, made and guaranteed by Sostratos, of an earlier decree preserved in the records of his office; but such a suggestion seems unnecessary and unlikely, and the name of Eukles in l. 7 is an argument in favour of the later date.

Until recently we had no documents from Zenon's files indubitably later than year 8 of Ptolemy II, and it seemed natural to suppose that that was the date of his death or of his departure from Philadelphia. But Hunt has now published a taxing-list (this *Journal*, XII, 113) in which Zenon appears as a tax-payer in year 18, the tax-collector being Achoapis. Taken by itself, this evidence would not be conclusive, as Zenon is not an uncommon name; but the British Museum possesses a letter from Zenon to the same Achoapis, dated year 13 and acquired along with a large number of other papyri which certainly come from the archive. This is evidence that cannot be disregarded, and we must admit it to be highly probable that Zenon was alive and resident in Philadelphia as late as year 18. If so, the date of the present text presents no difficulty.

βασιλέως προστάξαντος,
 Λίσχylου τοῦ παρὰ Σωστράτου
 ὑπαργείλαντος Ζήνωνι.
 ὑπερ οὐ ἐνέτυχεν Ἡνίοχο[s]
 5 τῶν Ἀνθίππου ταξίαρχος,
 εἰ ἔγγυος γεγένηται
 παραμονῆς Καλλίου πρὸς Εὐκλή,
 καταστήσας τὸ σῶμα ἀφείσθω
 τῆς ὑπερημερίας, κατὰ
 10 ταῦτά δὲ καὶ ὅσοι ἐγγυῶνται
 παραμονῆς τινες καταστή-
 σαντες τὸ σῶμα ἀφείσθωσαν
 τῆς ἐγγύης καὶ μὴ ἐκκλειέσ-
 θωσαν τῆς ὑπερημερίας.
 15 Λι, Αὐδναιίου.

5. Anthippos is not in the list of eponymous commanders given by LESQUIER, *Inst. mil.*, 337, nor was ταξίαρχος (cf. *P.S.I.* 513, 11) known to him as a title in the Ptolemaic army (*op. cit.*, 92-97).

7. Εὐκλή: a prominent personage in Philadelphia and at one time ἐπιστάτης of the former estate of Apollonios (*P. Cairo Zen.* 59366).

11. τινες: so the papyrus, though one would have expected *τινα*.

14. If the text is right, ὑπερημερίας cannot have the same connotation here as in l. 9. But it may be that a line has dropped out between 8 and 9 (τῆς ἐγγύης καὶ μὴ ἐκκλειέσθω). I do not venture to alter the text, but am much inclined to think that the scribe has been guilty of some omission.

Translation: "By order of the king, reported to Zenon by Aischylos the agent of Sostratos. Concerning the matter about which Heniochos of the troop of Anthippos, taxiarch, made a petition, if he has become surety for the appearance of Kallias in the action brought by Eukles, on producing the body of the defendant he shall be released from the penalty of exceeding the term [or, he shall be released from his guarantee and not be debarred from exceeding the term], and in like manner all who become surety for the appearance of another shall on producing his body be released from their guarantee and not be debarred from exceeding the term."

ADDENDUM.

In the commentary on no. 2 I have argued that Agenor, strategos of the Arsinoite nome in Krokodilopolis up to at least year 7 of Ptolemy III, was succeeded by Aristomachos and that the latter was succeeded by Diophanes, who held the appointment till at least year 4 of Ptolemy IV. It may seem to conflict with this theory that in *P. Petr.*, III, 31 and *P. Frankf.* 6 we find a strategos called Agathis acting administratively in the Fayyûm in years 4 and 7 of Ptolemy III. But as it is quite certain that Agenor was still in office at that period (*P. Cairo Zen.* 59351, 59369), we are led to infer that Agathis, who bears the unusual title of *στρατηγὸς καὶ ἱππάρχης*, must have been a subordinate strategos, stationed somewhere in the country. This again suggests that Serambos may have been an officer in a similar position and that the words *καθεσταμείου στρατηγοῦ* really refer to him (cf. *Dikaiomuta.* 42, *ὁ παρὰ τοῦ νομοφύλακος καθεστάς*), though without doubt Aristomachos was the metropolitan strategos. Perhaps we may also compare *B.G.U.* 1297, *τοῦ πρότερον ὑπὸ Ἰππ[όνικου?] στρατηγήσαντος ἐν Ὀξυρύχοις* (a village in the Fayyûm). As regards Aphthonetos, it should be noted that his letter (*P. Petr.*, II, 12) reached Agenor within two days and that he cannot therefore have been residing far from Krokodilopolis.

THE LETTERS OF AAḤMŌSE OF PENIATI

BY S. R. K. GLANVILLE

With Plates xxx-xxxv.

The British Museum Papyri Nos. 10102, 10103, 10104 and 10107¹ contain four letters, or parts of letters, written at a period of which we have very few epistolary remains. They come almost certainly from the correspondence files of a single man, a certain Aaḥmōse, whose name is known to us from other inscriptions, and from whose correspondence two other documents, now in the Louvre², have already been published by Maspero³, Spiegelberg⁴ and Peet⁵. Hitherto the chief interest of these two published letters has lain in their date, and in the scarcity of their kind. Palaeographically and linguistically they exhibit a mixture of classical and New Egyptian, while in their own *genre* they give us an example of the formulae employed at this transition stage in the language. The publication of four more letters of this period should therefore be valuable, both as confirming our knowledge of the nature of these formulae, and as further illustration of the palaeographical and linguistic peculiarities of the Middle Eighteenth Dynasty. The six letters taken together have also considerable historical interest.

The central figure of this correspondence is a scribe called Aaḥmōse⁶; and the only reasonable explanation of the coincidence of their interrelation and preservation is that all six letters come from the same dossier. The proof of this is to be found in the fact that of the six, four are addressed to Aaḥmōse by different persons, *i.e.*, one of the two Louvre papyri⁷ and B.M. 10102, 10103 and 10107, while the remaining two, ostensibly written *by* Aaḥmōse to two different individuals, were never meant to be delivered. They were in fact fair copies. The name Aaḥmōse occurs in every letter. In the four letters addressed to him (and in those only) it is accompanied by the title "scribe." In three cases Aaḥmōse is described as "of Peniati," *n pnīty*, (namely in both the letters written by him, and in B.M. 10103,) while in B.M. 10102 he is described as "He of Penit, *py Pnīt*, where *Pnīt* is certainly a mis-spelling of Peniati. In the two remaining letters, Louvre 3230 a and B.M. 10107, where the addressee is called simply the "Scribe Aaḥmōse," the identification of this man with him "of Peniati" may be considered certain. The arguments put forward by Peet⁸ in the case of Louvre 3230 a also hold good, *mutatis mutandis*, for B.M. 10107. And as subsidiary evidence we may note the similarity in the forms

¹ I am indebted to Dr. Hall for permission to publish these papyri for the first time.

² Pap. Louvre 3230.

³ *Notices et extraits des manuscrits de la Bibliothèque Nationale*, xxiv, première partie, 105-113.

⁴ *Zeitschr. f. äg. Spr.*, iv, 84-6. Only one letter is treated here: that *from* Aaḥmōse.

⁵ *Journal*, xii, 70-74.

⁶ I retain, without comment, the form Aaḥmōse used by previous writers.

⁷ These are both "gummed down on to a mummy wrapping" (PEET, *ibid.*, 70) and share a single number, Louvre 3230. For the sake of clearness I propose to refer to them henceforward as Louvre 3230 a and b in the order in which they are taken by Professor Peet; *i.e.*, Louvre 3230 a=Teti to Aaḥmōse, and 3230 b=Aaḥmōse to Tai.

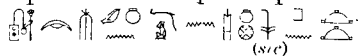
⁸ *ibid.* 73.

of the two letters. Both begin with the name of the writer, with no titles attached; both are written to the "Scribe Aaḥmōse." In the circumstances such coincidences can only indicate that they both belong to the larger group. The following table of the letters showing the writer and addressee in each case will be useful for reference, and helps to correlate the evidence for a single correspondence.

	B.M.				Louvre	
	10102	10103	10104	10107	3230 a	3230 b
Writer's name	Mentuhotep (Mentuhotep)*	Hori (Hori)	Aaḥmōse	Ptahu (Ptahu)	Teti	Aaḥmōse
Writer's title or and description	<i>ḥṣty-ḥ</i>		of Peniati			of Penati
Addressee's name	Aaḥmōse (Aaḥmōse)	Aaḥmōse (Aaḥmōse)	Waḥtrenput	Aaḥmōse (Aaḥmōse)	Aaḥmōse	Tai
Addressee's title and/or description	Scribe (Scribe) <i>ḥṣy Pnūt</i> (<i>ḥṣy Pnūt</i> [t])	(Scribe) (of Peniati)	Comptroller of the Household	Scribe (Scribe)	Scribe †	Treasurer

* Names in brackets from the address, as opposed to the body of the letters in question.

† "Beloved brother," etc.

Aaḥmōse of Peniati, then, is the central figure of all six letters. This fact is of importance in itself, but chiefly because we know Aaḥmōse as an historical person. The identification of our scribe with a man whose professional diploma¹ in the shape of a wooden palette², bearing his name and a suitable prayer, is now in the Louvre, is due to Professor Spiegelberg³. The palette also explains the elliptical phrase "Aaḥmōse of Peniati," for his full title as given there is , "the scribe Aaḥmōse, assistant of the Director of Works of Hermonthis, Peniati." When Aaḥmōse speaks of himself, or is addressed as *n Pnūtḥy*, we are probably to understand an emphasis on the personal relation of Aaḥmōse to Peniati in his official position⁵.

From Sethe, *Urk.*, IV, No. 18 (p. 52) we learn that this Peniati held office under five successive rulers, namely Amenophis I, Tuthmosis I and II, Hatshepsut and Tuthmosis III, and the later half of this period we may assume, in agreement with the evidence of the writing, was the period of Aaḥmōse's activities. The two inscriptions which supply these facts about Peniati's life are both in the Shaṭṭ er-Rigâl, on the West bank of the Nile, just below Silsilah. They are very short: the names of the Pharaohs (three in one case and two in the other) above the name and titles of Peniati. The second, which contains the names of Hatshepsut and Tuthmosis only, is "far up the ravine on a rock round a corner turning to the S.E."⁶ Presumably a faithful servant, perhaps Aaḥmōse himself, had

¹ ERMAN, *Die aeg. Schulerhandschriften*, 24.

² LOUVRE E. 3232.

³ *Zeitschr. f. aeg. Spr.*, LV, 84.

⁴ SETHE, *Urk.*, IV, 52; No. 19.

⁵ *Zeitschr. f. aeg. Spr.*, LV, 85. "Amasis, im Dienste (od. ä.)."

⁶ PETRIE, *Season in Egypt*, Pl. lxiv, 357.

written it; for Peniati was dead, his name being followed by 𓂏 . Hatshepsut was also dead¹ and Petrie argues therefore that as her name is not erased she can only recently have died, and that Peniati's death must have followed close on her own². The equation of Peniati who was Director of Works of Hermonthis with Peniati who left his name in the Shaṭṭ er-Rigāl as Director of Works in the temple (or estate) of Amūn under Hatshepsut and Tuthmosis III, cannot be doubted for a moment. Who would be a more likely person to be sent south, to the most productive of sandstone quarries, Silsilah, than a director of works under two of the greatest builders of the Eighteenth Dynasty? His duties would have carried Peniati well beyond the immediate range of the worked quarries, in search of better stone: hence our inscriptions. Returning to Aaḥmōse himself, Sethe³ (followed by Spiegelberg⁴) has suggested another identification. In the sandstone of Silsilah on the west side are a number of tombs, one of which, copied by Sir Flinders Petrie and Professor Griffith⁵, contains inscriptions chiefly devoted to a man called Aaḥmōse, and described once as 𓂏 ⁶, "Director of works," or 𓂏 ⁷, "Director," and once as 𓂏 ⁸, "Scribe of the Nome." We have seen that it is highly probable that Aaḥmōse of Peniati did accompany his superior to Silsilah on his expeditions to the quarries; but the uncertainty of the reading of the sign after 𓂏 makes us hesitate at first sight to accept the titles of the man whose tomb (cenotaph?)⁸ is in West Silsilah as sufficient evidence to justify the identification of him with Peniati's lieutenant⁹. The fact that the same tomb contained two more shorter inscriptions for two Theban officials¹⁰ (and their wives), may be taken as evidence for supposing that Aaḥmōse also came from that city. It is indeed possible that the words "of Hermonthis" of the Louvre palette refer to the native town of Peniati and not to the sphere of his activities: it is far more likely that his actual headquarters from which he directed the work, *e.g.*, on the Temple of Amūn, would be in Thebes. However, any uncertainty in the equation of the descriptions of Aaḥmōse of Peniati and of Aaḥmōse the Scribe of the Nome is considerably lessened by the existence of two inscribed objects in the British Museum. These are a shabti-figure and a kohḥ-pot, both inscribed with the name of a Director of Works, Aaḥmōse. The shabti, B.M. 24427, (height 8 inches,) is of alabaster (Pl. xxx, fig. 1). The inscription is incised and filled with blue frit, largely vanished, and is set between narrow lines filled with red paint; it consists of the usual text of the VIth Chapter for the Osiris 𓂏 𓂏 𓂏 . The style of the figure and inscription, and the spelling 𓂏 𓂏 𓂏 𓂏 , date the object to the middle of the Eighteenth Dynasty.

¹ 𓂏 𓂏 𓂏 𓂏 (for 𓂏 : see *Urk.*, IV, 52).

² PETRIE, *op. cit.*, 14. The force of this argument is lost when we remember that the inscription was the furthest from the river, and a considerable distance beyond all the others (*ibid.*). Tuthmosis' officials might be excused for not turning that last "corner." At the same time Peniati can hardly have survived her long, since he would have been an old man at the time of Hatshepsut's death.

³ *Urk.*, IV, 466, no. 148.

⁴ *Zeitschr. f. äg. Spr.*, IV, 94.

⁵ GRIFFITH, *Proc. Soc. Edl. Arch.*, XII, 94.

⁶ So Sethe, following the earlier reading of L., *D.*, text, IX, 89.

⁷ So GRIFFITH, *ibid.*

⁸ SETHE, *op. cit.*, IV, 66.

⁹ Surely Professor Sethe has begged the question of their identity by calling Aaḥmōse (*op. cit.*, IV, 66) "Gauschreiber und Leiter der Bauten unter Hatshepsout und Thutmoses III" (italics mine), since the only evidence for his having served under these rulers is in the possible identification of him with the Aaḥmōse of the Louvre palette E. 3212, whose master we have seen worked under them; whereas he appears to deduce the identification from the remark already quoted.

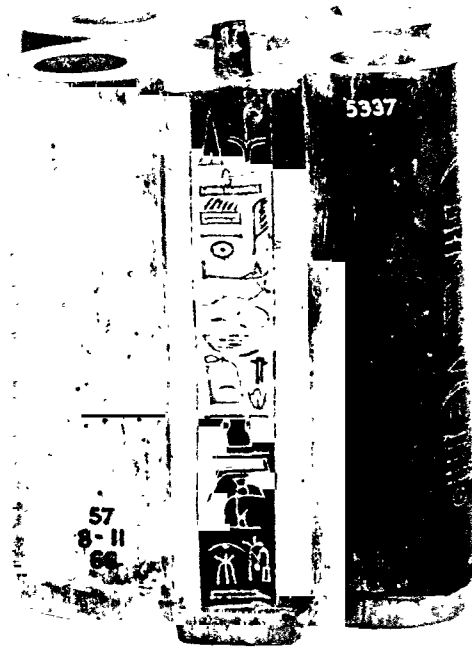
¹⁰ GRIFFITH, *ibid.* The incomplete name of the second priest may also have been Aaḥmōse.



1.



2.



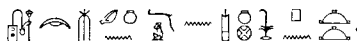
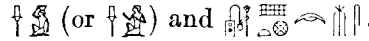




3.

1. Shabti-figure of Aahmose, British Museum 24427. *Scale* $\frac{1}{2}$
2, 3. Front and back views respectively of a wooden kohl-pot belonging to Aahmose.
British Museum 5337. *Scale* 2

The wooden koh̄l-pot, B.M. 5337, is of the quadruple-cylinder type (Pl. xxx, figs. 2 and 3) with five separate wells. Height over all $3\frac{9}{16}$ inches. A button (Pl. xxx, fig. 2) was to hold the lid of the pot (now lost) in place. A metal loop (same fig.), if part of the original object, was doubtless to retain the koh̄l-stick. The pot is inscribed with a single line of hieroglyphs on each cylindrical face as follows (Pl. xxx, fig. 2):

“Fine eye-paint for every day—(from) the first month of Inundation to the fourth month of Inundation, (from) the first month of Winter to the fourth month of Winter, (from) the first month of Summer to the fourth month of Summer.” Down the plinth at the back runs (Pl. xxx, fig. 3) “An offering which the King gives to Amen-Rē̄, that he may give every good and pure thing for the Ka of the Director of Works, the scribe Aaḥmōse, justified.”

The delightful cutting of the hieroglyphs determines the date of the pot, which is much the same as that of the shabti, with perhaps the possibility of greater range on either side. Both objects are therefore covered by the period during which Aaḥmōse of Peniati lived. We thus have a series of inscriptions from this period giving the following table:

1. Louvre palette: 
2. Silsilah graffito:  (or ) and 
3. Koh̄l-pot, B.M. 5337: 
4. Shabti, B.M. 24427: 

Without evidence to the contrary it is difficult to avoid seeing in the Aaḥmōse of these four inscriptions a single person—the Aaḥmōse of our letters. The table represents the chronological order of the inscriptions (3 and 4 are more or less contemporary), and the letters would belong to the same period as the Louvre palette.

Summing up all the evidence, we may say of the Scribe Aaḥmōse, with whose correspondence we have to deal, that he was the clerk, or assistant, or secretary to a Director of Works, Peniati, whose headquarters or more probably place of origin was Hermonthis: that he almost certainly lived at Thebes—the bulk of the Anastasi collection is believed to have come from there, and it is improbable that his letters were moved after his death—and worked there under Hatshepsut and Tuthmosis III, surviving well into the reign of the latter, since he was presumably a younger man than Peniati. It seems probable that in later years, after the death of Peniati, he took over some of his duties, being promoted to be Director of Works, and was given the rank of Scribe of the Nome. As Peniati's deputy he must have made many visits to the quarries at Silsilah, and there would be nothing unusual in his having prepared for himself a tomb on the west bank which bears his name. We must turn to the letters themselves for further information.

Papyrus B.M. 10102¹. Pls. xxxi, xxxii, fig. 2 and xxxv (facing p. 312).

TRANSLATION.

Recto (1) *The Noble Mentuhotep greets the scribe Aaḥ-(2)mōse of Penit, in life prosperity and health; and in the favour of (3) Amen-Rē̄, King of the Gods, of Atum, Lord of Heliopolis, Rē̄-(4)Harakhti, Thoth, Lord of the Divine words, Seshat (?)*¹, (5) *Lady of writing, and of*

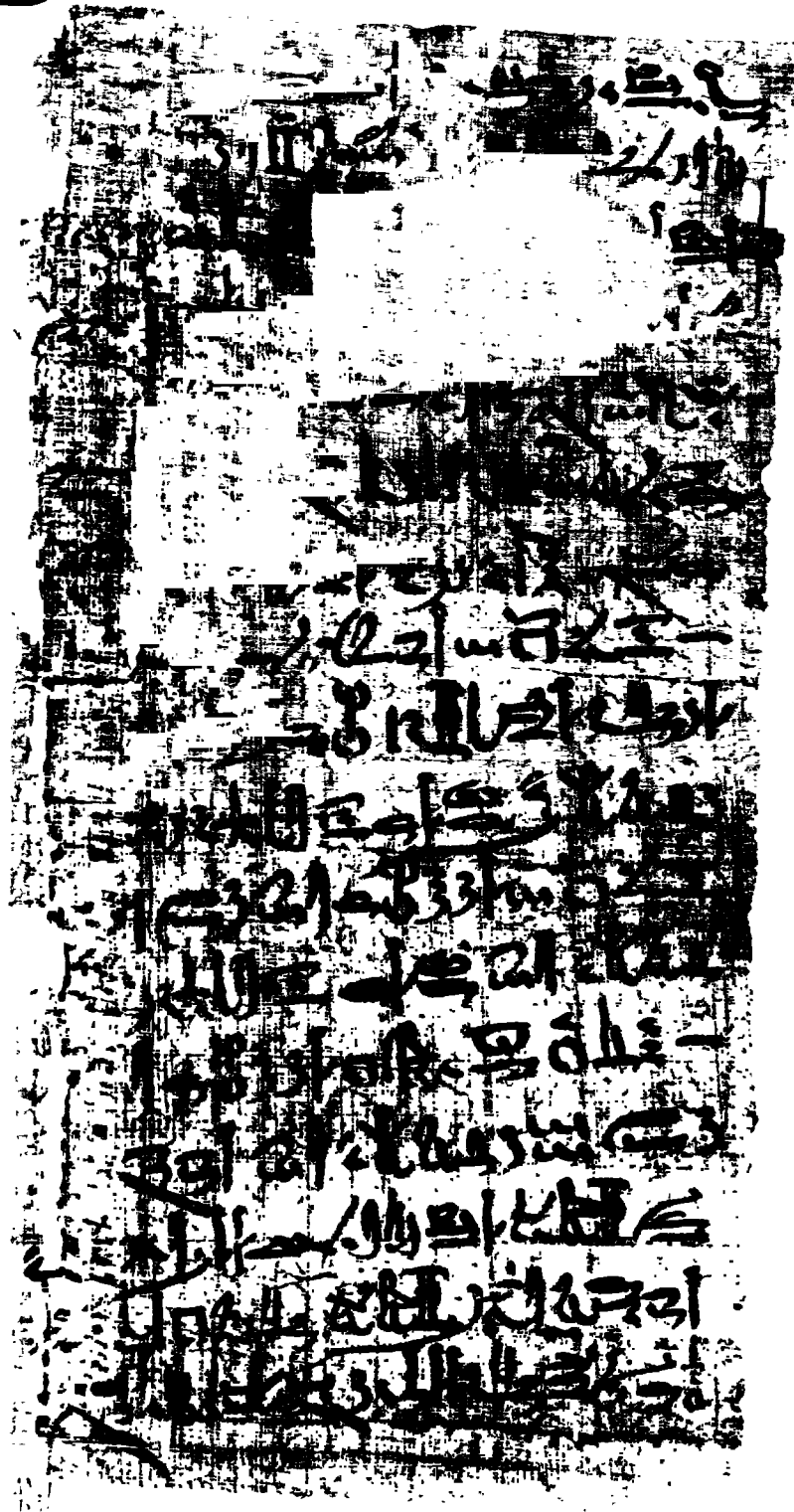
¹ The papyrus is 9 inches long, and varies in width from $4\frac{3}{4}$ inches at the top to $4\frac{1}{2}$ inches at the bottom. It has been attacked by the worm and is torn in places. Its legibility is only seriously affected along a strip about $\frac{3}{4}$ inch thick down the length of the left-hand edge. Here the papyrus is not only full of holes and tears, but its surface also has been badly rubbed, the signs being almost obliterated even where the

thy revered God², who loves thee: may they grant thee favour (6) and love, and enterprise in all thy undertakings. Further: (7) please have³ erected the matting⁴ and beams of (8) the storehouses and back of the house. (9) The wall is six cubits (10) high. Then, as to the doors of (11) the storehouses, let them be five cubits (12) high; and⁵ as to the doors (13) of the living-room, let them be (14) six cubits high. And thou (15) shalt tell the builder Amenmōse to do it thus, (16) and to hurry on the building of the house hard⁶. (17) How fortunate that my brother is with thee; two heads are better than one!⁷ Verso (1) Further: I will send thee the height of the (2) house, as also its breadth. Further: let (3) a shelter be made from some of the matting and (4) let it be given to Benya. Further: let (5) the price⁸ of the property be given to (6) its owner; let his heart be satisfied, mind! (7) See that he does not quarrel⁹ with me when I¹⁰ arrive!

(Address) Mentuhotep to the scribe Aahmōse¹¹ of Peni[t].

NOTES ON THE TRANSLATION.

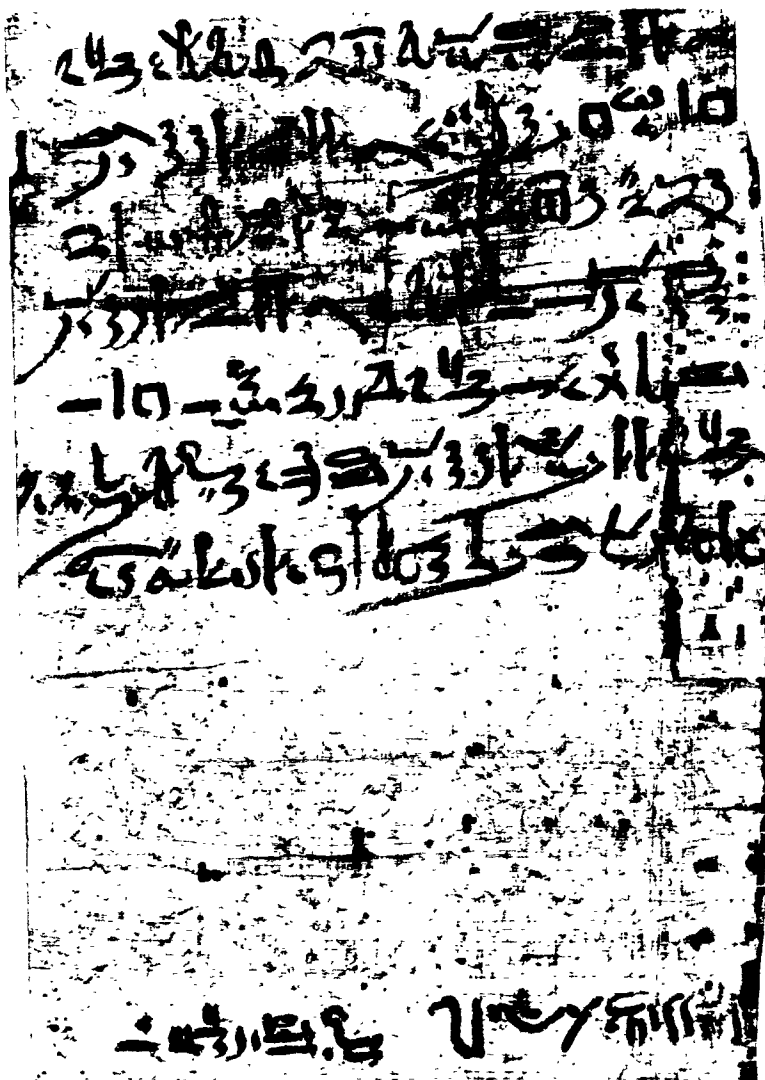
1. The 𓂏 is certain; $\text{=}\backslash$ extremely probable; but is 𓂏 possible?
2. Peet (*Journal*, XII, 70) takes *ntr.k špsy* in apposition to Amen-Rēc, as indeed is possible on the evidence of the single example provided by the Louvre letters. Clearly, however, it cannot refer to Amen-Rēc in the present context: nor can it be taken in apposition to the preceding deity since that is a goddess. (Even if the difficulty of concord could be overlooked, the point of the phrase would be lost, since two different deities would both be referred to as “thy revered god” in addressing the same man.) Surely the words must mean something like “thy patron saint,” and in the two most formal greetings (B.M. 10104 and Louvre 3230 a) are appropriately coupled with the name of Amen-Rēc—as if to emphasize at the outset the two extremes of possible worship, the official first god of the state and the private god of the individual. This interpretation is clinched to my mind by the words *mr tw* which follow. Peet took the verb as *sdm.f* with optative sense, and the names of the gods which followed as subject. With the new examples before us (B.M. 10102, 5 and 10104, 3) it is clear from its position that the phrase *mr tw* is to be taken with *ntr.k špsy* “thy revered god who loves thee.” The word-order in both cases makes it impossible to take *mr tw* as *sdm.f*. But we should expect the more idiomatic form of the participle, the geminating *mrr*: and that is precisely what we find in Louvre 3230 a, 2. If further proof were needed that *mr* in the B.M. letters is the participle and not *sdm.f*, it would be found in the omission of *mr tw* altogether from the one lengthy greeting which also omits *ntr.k špsy*.
3. See Gardiner, *Eg. Gram.*, § 440, who suggests that the force of the imperfective *sdm.f* in such a case is diffidence or politeness. The form $\text{𓂏} \text{𓂏}$ with the *r* is quite anomalous (*op. cit.*, § 289, 1). It is possible that the scribe meant to use the introductory phrase *r ntt* (as in *vs.* 1) and accidentally omitted the second word.
4. The word *in*, which occurs again (*vs.* 3) in the plural, is, I believe, unknown. It is clearly an object sometimes used in house construction, and from its determination appears to be made of wicker or wood, rather than stone. It occurs here in juxtaposition to *snw*, “beams,” and should therefore be connected with the process of roofing. From its use in *vs.* 3, and the presence of the plural article *nj*, we should read it as a plural here also. The reference in the second passage is still more definitely to roofing, since the *inw* are to be used to make a shelter (lit. “protection”). The modern inhabitants papyrus itself has not been torn. The surface of the *recto* (H/V) only is thus affected. The writing on the *verso* is very clear, and as the scribe has started again at the original top of the page (*i.e.*, the top of the *recto* is also the top of the *verso*), and allowed himself a small margin, there is no difficulty in reading it.



Pap. British Museum 10102, *recto*.
Nearly natural size



1.



2.

1. Pap. British Museum 10103, address on *verso*.
 2. Pap. British Museum 10102, *verso*.
- Nearly natural size.*

of Upper Egypt roof their mud brick houses by laying palm fibres on wooden beams and plastering them together with mud, weighing down this layer with broken pottery. A similar process must have been in use among the ancient Egyptians, but the determinative of *in* shows that the word means something actually made rather than reeds or leaves simply. It must therefore have been some kind of basket work or matting which was placed on the beams and then plastered, both sides, with mud. We can probably define the word even more certainly, in the light of the excavations of the palace of Amenophis III at Medinat Habu. The very important description given by Tytus¹ of the different types of roofing construction in use in the palace, shows that the lighter kind was identical in principle with that employed to-day in Egypt. More than that, it tells us the exact nature of the *in*, viz., "heavy mats of palm fibre," the *gerid* of the modern Egyptian, used by him for this purpose². We may therefore translate *in(w)* "mat" or "matting." *S(w)*; \curvearrowright is probable, but the traces of the plural strokes are doubtful.

5. See Gardiner in this *Journal*, XIV, 86 ff.

6. I owe the reading of the signs after \perp to Dr. Gardiner. The phrase occurs again below *vs.* 6; see *Wörterbuch*, *sub voc.* and Gardiner, *Lit. Texts*, 42, n. 6, with his reference to Erman in *Zeitschr. f. äg. Spr.*, XLII, 107.

7. The second *hr* in the phrase *didi-i hr-i hr-k* is certain. The imperfective *sdm.f* suggests that the whole phrase may be a proverbial saying; perhaps literally "let me place my head and thy head (together)." At any rate something like "Two heads are better than one" is indicated by the context, and seems possible.

8. For *sbt* see Peet, *Journal*, XII, 71. *itn n pr*, literally the "land of the house," seems to be the land on which the house is being built, and "property" is the word nearest in sense to the Egyptian phrase. I took *itn* at first in the more technical sense of "flooring," "floor" (see Borchardt, *Zur Baugeschichte des Amontempels in Karnak*, 40, line 4, and cf. *Wörterbuch*, *sub voc.*), translating, "let the price of the flooring [mud tiles, perhaps painted] of the house be given to his (Benya's) master." The translation above (p. 298) is Peet's suggestion, and to my mind much happier in the context.

9. Cf. Gardiner in *Zeitschr. f. äg. Spr.*, XLVIII, 43, n. to l. 16.

10. In Pl. xxxv read \curvearrowright for \cup .

11. The stroke here does duty for the determinative used as ideogram. See Gardiner, *Eg. Gram.*, Sign-list, Z. 5, where he quotes examples of this name so written. Cf. below, B.M. 10107, the writing (l. 5) of Tetisheri and (l. 9) of Ramōse.

COMMENTARY.

The general sense of this letter is quite clear. A certain Mentuhotep, a person of some small importance, writes to Aaḥmōse to give him instructions about a house which is in the process of building. (Our letter is presumably not the first on the subject.) Aaḥmōse is superintending the operation—he may have been the contractor, hardly the architect—and is to pass on his information to the actual builder, Amenmōse. The first part of the letter is taken up with detailed instructions for the building of the house, which is to be carried on with as much speed as possible. The writer then congratulates himself on having a brother with Aaḥmōse who can give an eye to his (the writer's) interests. The second part of the letter looks further ahead. Mentuhotep promises to send further instructions with regard to the building operations and he gives orders for the putting up of a hut for a workman³ (?) who is, one supposes, to assist in the building.

¹ ROBB DE P. TYTUS, *A preliminary report on the re-excavation of the Palace of Amenhotep III*, 13.

² Cf. PEET and WOOLLEY, *City of Akhenaten*, I, 57 and 73.

³ Or does Mentuhotep mean that some of the *inw* are to be reserved for Benya? (Peet).

Finally he arranges for payment to be made for the land on which the house is being built and urges that this should be satisfactory to the recipient, who is (evidently) a neighbour of his with whom he wishes to be on good terms when he comes to live in his new house. Several points, however, require discussion.

Mentuhotep himself is, as far as I can discover, unknown. He was probably a Theban, since the capital was the centre of Aahmōse's activities, and Mentuhotep proposes (*vs.*, ll. 1-2) to inform him of the progress of the building, proving that he cannot have been far from the spot. Peet's suggestion¹ that the invocation of Ptah of Memphis in Louvre 3230 a may imply that the writer's home was at Memphis seems to me unfounded. Throughout these letters the invocations are to the Great Gods of the Empire, Amen-Rē^c of Thebes, Ptah of Memphis and Atum of Heliopolis² (with possibly a local reference to Thebes in the "Gods and Goddesses who are in Karnak" of B.M. 10103, 10104), and to Thoth³ (and his female counterpart?) as Patron of Scribes. Ptah may indeed have been envisaged as Patron of Building, as well. Rē^c-Ḥarakhti simply stresses the solar side of the state cult of Amūn.


The recipient of the letter was Aahmōse, here called "(he) of Penit." The name itself, Penit, is sufficiently close to the probable pronunciation of *Pnistry* to be explainable as an attempt to spell that name. This fact, taken into consideration with the strong evidence already cited for the equation of the two names—namely, the common origin of all four letters in the British Museum, the rareness of letters at this period, and the mention of Aahmōse (with or without *n Pnistry*) in the five other letters, is sufficient to convince us that Mentuhotep was writing to the man we know as Aahmōse of Peniati, even though he was not so certain as ourselves how to spell the name of his correspondent's superior.

Aahmōse's official position as confidential clerk to Peniati can scarcely have been gained without some knowledge of the duties of a builder and contractor, and even of an architect. And the inscription at Silsilah (see above p. 296) shows that though his routine work may have lain in a Theban office, he was not merely a Civil Service clerk. There is nothing surprising, then, in a friend appealing to him personally to superintend the building of his house near by. The house would be built chiefly of sun-dried mud bricks⁴, and we know that stone was very little used in private houses except for the doorways⁵ and certain internal fittings. Now the details emphasized by Mentuhotep in the first half of his letter to Aahmōse are the respective heights of two doorways. It is very possible that Aahmōse had undertaken to supply the stone needed for the house, which he would no doubt be able to get at "wholesale" prices⁶.

There are several difficulties connected with the interpretation of Mentuhotep's instructions in *r.* 7 and 8, "Please have erected the matting and beams of the storehouses and back of the house"; we should expect the word *s(w)* (beams) to come before *in* (matting), that being the natural order of construction. This is not so serious

¹ *Journal*, XII, 73.

² Cf. Griffith in *Journal*, XIII, 195.

³ Professor Peet agrees that the signs after the god's name in Louvre 3230a should read , not as he read them, *Journal*, XII, pl. xiii, top piece, l. 3.

⁴ See PEET and WOOLLEY, *City of Akhenaten*, I, 37.

⁵ *ibid.*

⁶ At El-'Amarnah, the only site from which we have concrete evidence of normal housing construction in classical Egypt, stone doorways are as a rule only found for the main entrances of the large houses, partly owing to the poor quality of the native limestone, and partly owing to the speed with which building was carried out there. But there is no reason why doorways of stone should not have been the general rule for all rooms at Thebes in the middle of the Eighteenth Dynasty.

an objection as the awkward phraseology after *wšḥ*. If we had *ḥr* instead of *n* at the beginning of line 8, we should translate simply "cause the matting and beams to be placed on the storehouses, etc." Can the preposition *n* be used in this way with *wšḥ*? Certainly the sense of the whole passage is improved if we take *n* as the preposition (if only with the meaning "for" or "to"), rather than the genetical adjective *nī*¹. But whatever the precise phraseology may have been, the general meaning is clear, that the beams and matting for the roof were to be put in position on the (already standing) walls of "the storehouses and back of the house." What are we to understand by the "storehouses" and the "back of the house"? For each phrase two explanations are possible. First, the storehouses may be granaries or other sheds standing outside and (generally) unconnected with the main house; or they may be rooms inside the house which, we know², contained cupboards, and were obviously used as storerooms. The "back of the house" might similarly refer to the complex of kitchen and general rooms, etc., which stood outside, and detached from, the main house on any fair-sized middle-class estate, and which is generally considered to have been the servants' quarters. These rooms are usually at the back of the house. Or, again, the phrase *phwy n pꜣ pr* may simply refer to the hindmost rooms of the house. For the Egyptian house of modest size, although built round a central room, so as to form a square building, was divided into three essentially different parts, each part becoming more intimate and less public the further in one went³. This can be well seen by a study of Mr. Newton's plan of the house of the Vizier Nakht at Akhetaten⁴. Now, immediately after speaking of the *phwy n pꜣ pr*, the writer goes on to give the height of the wall, which was presumably either literally a single wall, or at any rate a series of continuous walls. And since this wall has clearly something to do with roofing the storehouses and back of the house it follows that the *šnt* and the *phwy n pꜣ pr* were parts of the same architectural complex. The height of the wall would naturally condition the addition of the roof (*in, sꜣ*); and the meaning of this whole sentence must be: Please roof the storehouses and back of the house now, as the wall is already high enough, *i.e.*, 6 cubits. The part of the building thus referred to is more likely to have been the back of the house itself than a complex of kitchens and storerooms outside and separate from it. This is borne out by the allusion to the *ḥmst*, "living-room,"⁵ which by its nature is certainly the "central hall" of the private side of the house (not the large "Central Hall" in which guests were received), and which is mentioned in parallelism with the "storerooms." The wall referred to therefore probably formed the outside of the living-room and a number of storerooms, and the beams for the roof were to rest on this and at points an equal height from the ground in the wall of the Central Hall (which was allowed a greater height than the rest of the house to enable it to be lighted by clerestory windows), and thus to condition the height of the roof of the "back of the house," as opposed to the height of the great central hall next door. The difference in height between the doors of the "storerooms" and of the "living-

¹ Cf., however, *r wšḥ whrt n wšḥ nswt*, "for building the dockyard of the royal barge," B.M. 10056, verso, col. 9, 11 (unpublished), and Berlin *Wörterbuch*, I, 256, *sub voc.* F. III.

² PEET and WOOLLEY, *op. cit.*, 47.

³ The phrase *lw-ī r phwy pr* occurs as a woman's oath in GARDINER, *The Inscr. of Mes*, 51, N. 35, "(If I speak falsely) may I be sent to the back of the house." Gardiner interprets this as being the servants' quarters, *i.e.*, that the wife was to be relegated to the company of the servants she was accustomed to command. But it might equally refer to the *ḥarim* part of the house itself, and simply mean that the lady was in disgrace and must not come into the public rooms with her husband and his guests.

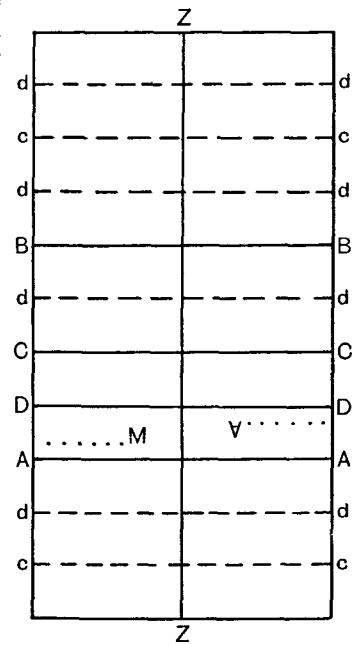
⁴ PEET and WOOLLEY, *op. cit.*, Pl. iii.

⁵ Cf. *st ḥms(t)*, Pap. B.M. 10052, 8, 9, and *Gol. Glossary*, 5, 13. (Peet.)

room" is, as we should expect, in proportion to the differences in their size and importance. But 6 and 5 cubits¹ (about 10 ft. 4 in. and 8 ft. 5 in. respectively) are perhaps higher than has been conjectured hitherto from excavations on the town-site at El-'Amarnah², and these details are worth noting for future restorations of domestic architecture; as also is the height of the wall (l. 9) which determined the height of the roof from the floor.

In *vs.* 4 a fourth person, Benya, is brought into the discussion. If I am right in translating *mky* = "shelter," then he was a labourer engaged in the building of the house. He appears to have lived far enough away from the site to make it inconvenient for him to return home at night so long as he was working at it. So a "shelter," consisting, probably, of a small back room—small enough not to require beams to support the wicker of the roof—was to be put up for him³.

The address of this letter was written about two-thirds of the way down the *verso* and parallel with the writing on it, but while the writer's name and the "to" of direction are the same way up as the rest of the writing on the *verso*, the name of the recipient and his title are upside down. The two names are separated by about a quarter of an inch of blank space (Mentuhotep's name being on the left of the blank), and in such a way that when the papyrus was folded vertically in half the two names would be on opposite sides. The horizontal folds had to be made first, and from the traces of them that can be seen, it looks as if the papyrus was folded into so small a bundle that there was room left on its surface for a single line of address only. This thin strip of the surface of the papyrus is a slightly lighter colour than the rest. The address was, of course, written after the folding was done. It will be seen that although the principle of bringing the names of the sender and recipient into relation by means of the fold is the same as that of the Middle Kingdom letters from Lahūn⁴ the method on which it is worked is different. The accompanying figure will explain the procedure. The folds were made in the order of the letters of the alphabet, but so as always to have the surface which later received the address (*i.e.*, the area *DDAA*) exposed. Capital letters indicate the primary folds, small letters those which were automatically made in the inner part of the papyrus by the primary folds. There are no traces of a seal of any kind.



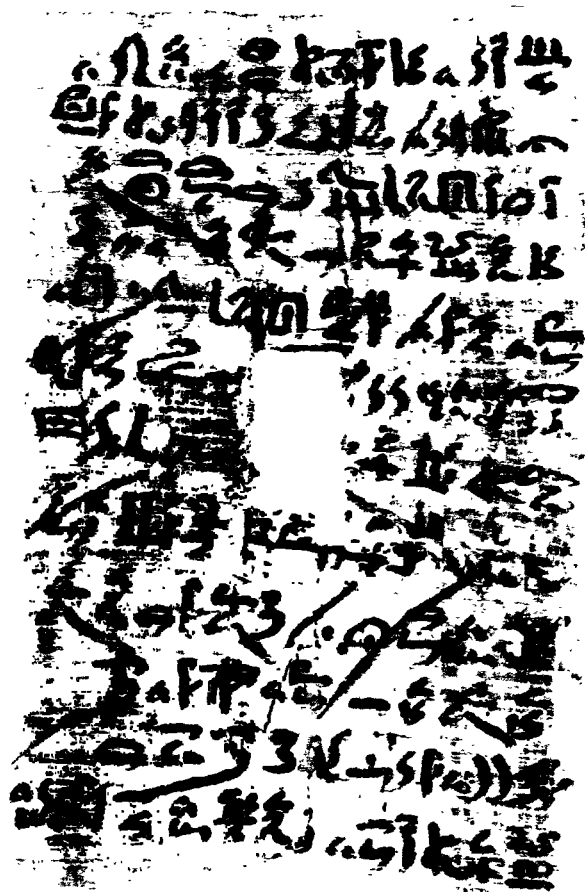
¹ Presumably the "royal cubit" of 20.6 inches, since it is not otherwise distinguished: *cf.* GRIFFITH, *Proc. Soc. Bib. Arch.*, xiv, 406. If it were the "small cubit," the two heights would be 8 ft. 6 in. and 7 ft. 1 in. respectively.

² The most concrete pieces of evidence from these are the few stone doorways found complete. See PEET and WOOLLEY, *op cit.*, 18, and BORCHARDT in *M.D.O.G.*, I, 18.

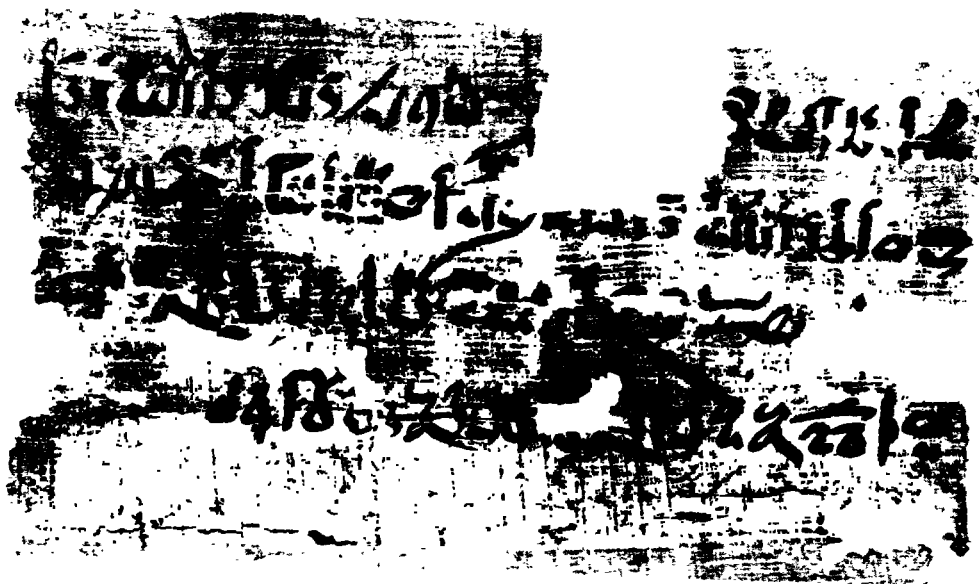
³ During the Egypt Exploration Society's excavations at Tell el-'Amarnah in 1923-4, it was found necessary to build a new house for the excavators. A convenient site was chosen and some men detailed for the work. The site of the new house was four miles from the old, and so the men who were working on it were told to live by the new building. They lived in two rooms, which consisted in part of the ruin of the outhouses of the ancient house, and they had to add a few bricks to the walls (to make the top level), and put on a roof of reeds and mud plaster. As each room was to hold a squad of men, they could not dispense with beams to support the reeds. In all other respects this was a perfect modern parallelism to the Benya incident.

⁴ GRIFFITH, *Kahun Papyri*, 70.





1.



2.

1. Pap. British Museum 10107, *recto*.
2. Pap. British Museum 10103, *recto*.
Nearly natural size.


Papyrus B.M. 10103¹. Pls. xxxii. fig. 1, xxxiii. fig. 2 and xxxv.

TRANSLATION.

Recto (1) *Hori greets his [master]¹, Aaḥmōse, in life, prosperity and health, and in the favour of Amen-(2)Rē, King of the Gods, of Ptah, South-of-his-Wall, of Thoth, Lord of the Divine words², and of the Gods and Goddesses who dwell in (3) [Karnak?]: May they grant thee favour and love, and enterprise in all thy undertakings! Further: (4) Hail to thee, Hail to thee!³ Is it well with thee? Behold, it is well with me!⁴ (End of letter⁵).*

Verso (Address)⁶ *Hori to the scribe Aaḥmōse of Peniati, his Master.*

NOTES ON THE TRANSLATION.

1. The restoration fits the gap excellently.
2.  Certain.
3. See below, Commentary, p. 304.
4. Definitely *mk twi*, not *mk wi*.
5. The hieratic does not reach the end of the line by a few signs, and there would have been room for one, or perhaps two (with nothing to spare) more lines below. So that this is clearly the whole letter.
6. The address is written just below line 4 of the *recto*, only on the *verso*, the words *Hri n* being upside-down in respect of the writing on the *recto*.

COMMENTARY.

The value of this letter is mainly linguistic. It can hardly be said to throw any fresh light on the activities of Aaḥmōse, and it tells us nothing about the writer. Various small points, however, make it of importance to the series.

In the first place, as has been pointed out in note 5 above, this letter is complete. Its intention, therefore, was quite unofficial. Hori sends a polite little note to Aaḥmōse, hoping that all is well with him, as it is with himself. The *nb-f*, "his master," seems here to imply something more than mere politeness, however, since we do not find it in Ptah's letter to Aaḥmōse. We must assume that Hori is in a subordinate position to that of Aaḥmōse—possibly he was a junior official in his own department who had not yet graduated sufficiently to take to himself the title scribe². Whether the motive for the letter was politeness pure and simple, or a preliminary to a request, we cannot tell. It will be more profitable to notice one or two points in the manner rather than the matter of the letter.

There seems to have been no correspondence between the lengths of the contents of a letter and of its opening formulae. B.M. 10107, which has much more to say than B.M. 10103, reduces the invocation to Gods to a single name, and that in its shortest form. Hori, on the other hand, although omitting to mention two forms of the Sun God, brings in additional deities which Mentuhotep, writer of our longest letter, had not bothered with. Hori's array of gods seems to me to be further evidence for placing the centre of activities of all the persons connected with the correspondence in Thebes; since besides opening with Amen-Rē he finishes his invocation with "The Gods and Goddesses who dwell in

¹ A fragment by itself, 5¼ inches horizontally by 4 inches vertically. The edges are very ragged in parts, two large holes in the top and right-hand edges respectively have destroyed several signs, and there are smaller holes and cracks which do not seriously affect the legibility of the text. *Recto* on the horizontal fibres.

² See ERMAN, *op. cit. passim* and especially pp. 23, 24.

5. See above n. 2.
6. The second *bikt* is presumably a redundancy, not the slave's name.
7. *Nfy* must be a nickname or second name of Mini; it can hardly be another person.
8. Cf. Gardiner, *Eg. Gram.*, § 468, 2 (Faulkner).

COMMENTARY.

If it stood alone this letter might well be no more than an exchange of gossip. There is no indication that the writer, still less that the recipient, was implicated in the action of the story. But the fact that in Louvre 3230 b Aaḥmōse is personally concerned in some dispute about a slave girl makes one wonder whether it is not more than a coincidence that the present letter deals with a similar subject. There is, however, no clue in B.M. 10107 to enable us to formulate any theory of Aaḥmōse's part (if any) in the action, and it is best therefore to leave him and Ptaḥu out of it.

It is not easy to reconstruct the situation from this brief note describing a single phase in what must have been a long drawn out affair. Ptaḥu obviously assumes that his reader is thoroughly acquainted with the beginning of the story, and is only concerned to keep him up to date. From the laconic greeting and omission of any title but the word "scribe" for Aaḥmōse, one gathers that the two men were friends and equals.

The situation thus recorded I believe to be as follows. A certain chief labourer, Ramōse, has a grievance against a man of some position (a *ḥsty-ꜥ*, whatever the exact significance of that word is at this time), called Mini Nefy ("The Captain"), in respect of a slave girl belonging to the latter. Ramōse has challenged Mini to take the matter to Court. Mini has refused to do so, and in consequence Ramōse has been going about proclaiming Mini's refusal to his friends (ll. 11, 12). At this point our letter takes up the story. An overseer of the slaves (presumably those of whom the girl in question was one) is sent (by whom?)¹ to a second *ḥsty-ꜥ*, Tetisheri, with whom the slave girl has taken refuge. This man is clearly a patron in some way of Ramōse, and is now approached by the overseer of slaves with the suggestion that *he* (Tetisheri) should hale Mini before the court, on account of the girl. That apparently was as far as they had gone in the matter when Ptaḥu wrote. We cannot therefore know the result of the suit.

If, however, my reconstruction is right, one very interesting small point of legal procedure at this time appears. Ramōse might go about vilifying Mini, but he could not sue him in a court of law. When his taunts failed to provoke Mini, he had to go to a man *who was Mini's social equal* and persuade *him* to sue Mini. In other words a *fellāḥ* could not sue a Bey. Further it appears that a slave who considered that she had a real grievance (one which would conceivably be sustained in a court of law) might leave her master and take refuge with a third party. But there is not sufficient information in the letter to make it clear whether this was a legal privilege or merely a custom which worked reasonably well in practice and was therefore tolerated.

Unfortunately a lavish use of pronouns in the first part of the letter, where we should have preferred at least one more personal name, necessarily leaves us uncertain as to the

¹ Since this was written Dr. Frankfort has suggested to me that the sense of the passage is: He (Tetisheri) has sent Abui...to summon Mini to come to Court, "but he does not answer for Mini's appearance" *bw wšb-f Mini*, because of the statement of Ramōse that Mini has already refused his challenge to appear in Court. This seems to me just as compatible both with the grammar of the passage and with the sense of the whole letter as the version given above. It means of course throwing over the first point made in the following paragraph; but in any case the hypothetical evidence of a single letter would not by itself be sufficient to establish a theory such as that I have put forward.

exact reason for the overseer of slaves being sent to Tetisheri (or to Mini?), and certainly unconvinced that this is precisely what did happen. But as the clue to the past history of the case lies in Ramōse's accusation, quoted in *oratio recta*, we cannot be far wrong in our general presentation of the affair. Some small evidence certainly emerges for a study of the relationship between master and servant in the terms used to convey that relationship in our letter. The girl in question¹ is said to be *m-ꜥ* "in charge of," "in the possession of," or simply "with" Tetisheri, but *nt* "belonging to" Mini. That this is no casual distinction is proved by the use of the same terms in the same circumstances in the Louvre letter 3230 b. In l. 8 of this letter, where the mother of the slave is represented as charging Aahmōse with responsibility for her daughter, she is quoted as using *m-ꜥ*, "in charge of" (so Peet); although the same relationship is described ll. 2 and 7 by the noncommittal *hnꜥ*. The fact that *m-ꜥ* is used when the mother wishes to stress the *responsibility* of the person in charge certainly suggests, in combination with the B.M. letter, that the phrase has at least a semi-technical sense in both cases. Similarly in l. 6 of the Louvre letter *nt* refers to the possession of *bykt* by their master, Tai². But although these two terms *m-ꜥ* and *nt* appear to have in such contexts a constant and almost technical signification, they do not provide us by themselves with sufficient material for any theories of the exact nature of slavery or servitude in Egypt at this date. Further evidence for the study of this subject is to be found in the Louvre letter, some points in which are discussed below, p. 309 foll.

As a final word before leaving B.M. 10107, it is interesting to compare its style with that of B.M. 10102. The lengthy formal greetings and handsome script of the latter contrast strongly with the comparatively abrupt introduction and untidy but more business-like hand of the former. The one suggests the man of breeding and leisure, and at the same time the semi-official tone of the communication (it is after all first and foremost a business letter, even if between friends); the other a man whose time is not all his own, whose education has been mainly acquired in his own lifetime, and whose pen is unhampered by any consideration of personal dignity or social etiquette. The contrast appears again in the marked retention of classical idiom in the former, as opposed to the introduction in the latter of such usages from colloquial language as *bw* for the negative. And it all agrees extraordinarily well with the difference in the positions of the two men: the one a landed proprietor of the old ruling class; the other probably a clerk, of humble birth, with little or no interest in the traditional literature, but alive to reactions in his own environment.

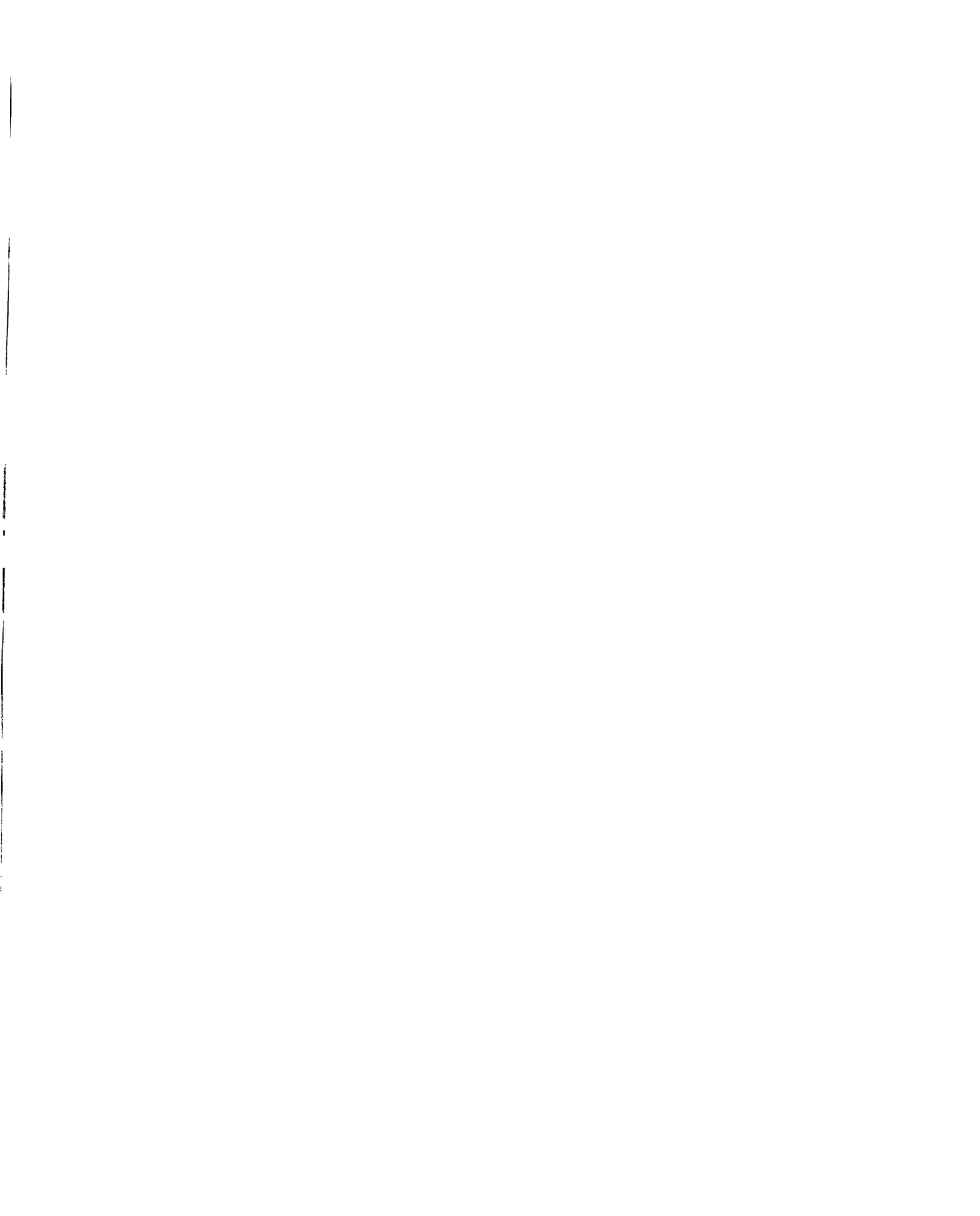
Before we turn to the letters written by Aahmōse himself, it will be worth while to glance at the first of the two letters in the Louvre, published by Maspero and Peet, and to see if we can add anything to what has already been said about it, in the light of the information gained from the B.M. letters.

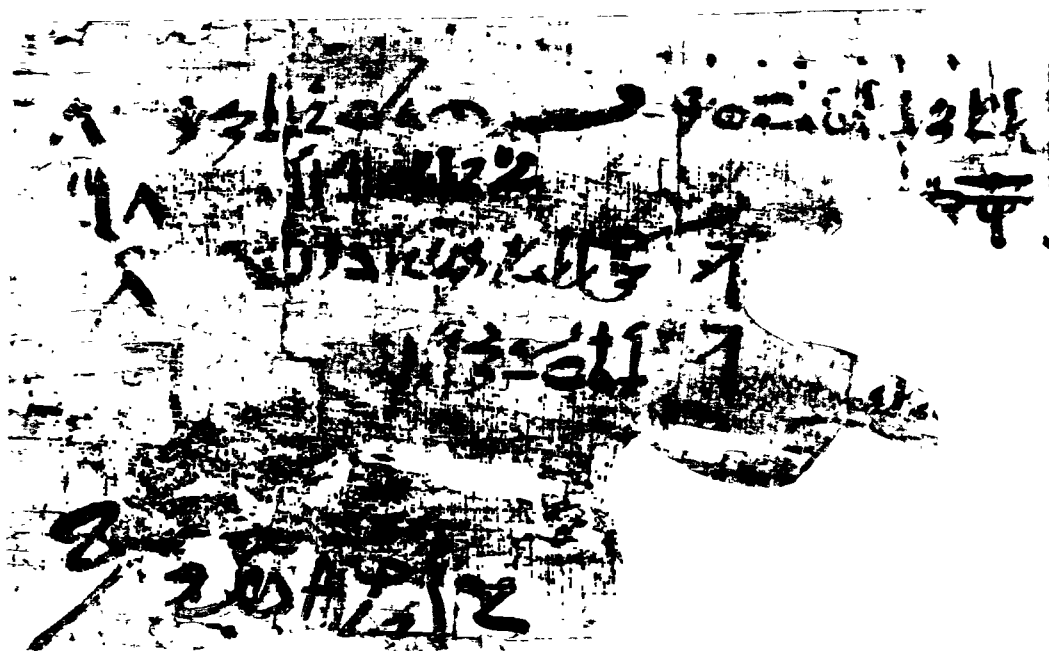
Louvre 3230 a.

Though the gist of the letter is intelligible, the first part of it lacks coherence as a result of the lacunae. The end, too, is lost. To this fact we probably owe the absence of an address, and the slight objection felt by Peet to the letter being an original one

¹ It will be generally agreed that we are dealing with the same slave all through the letter, in view of the repetition of the technical word *wpt* in close connexion with the girl at the beginning and at the end.

² Cf. also the B.M. Stele 1628 ([HALL], *Hieroglyphic Texts*, v, Pl. i, l. 13), where *nt* (after *rmtt*) is used of people (*i.e.*, slaves or household servants) belonging to the writer's grandfather. In the next line, however, the direct genitive is used to express the same relationship.





2.

Pap. British Museum 10104, *recto* (1) and *verso* (2).

Nearly natural size.

(instead of a model) is removed, since we see from B.M. 10102 and 10103 that in the Eighteenth Dynasty the address could be written parallel with the text of the letter as well as at right angles to it. We have noticed, too, that the tendency was so to fold the letter that the address was written towards the bottom rather than the top of the page, even when the *verso* was un-inscribed; so that it may well be that the piece of the Louvre 3230 a which is lost contained the address on its *verso*. Another difficulty felt by Maspero and Peet was the absence of any title before the writer's name. This is paralleled in B.M. Papyri 10103 and 10107. There is, as far as I can see, no point of contact in the substance of the Louvre letter with that of any of the others.

Papyrus B.M. 10104¹. *Recto*². Pls. xxxiv and xxxv.

TRANSLATION.

(1) *Aaḥmōse of Peniati informs*¹ *his lord, (2) the Comptroller of the Household, Waḥtrenput, in life and prosperity* (sic)² *and in the favour of Amen-Rēc, (3) King of the Gods, and of thy revered god who loves thee*³, *and in the favour of Atum, Lord of Heliopolis, (4) Ptah, South-of-his-Wall, and of the gods and goddesses who dwell in Karnak. May they grant (5) thee favour and love and enterprise in all thy undertakings.....(rest lost*⁴).

NOTES ON THE TRANSLATION.

1. It is difficult to see what could be inserted between $\overline{\text{v}}$ and \square . It is a small sign written over the \square . From the traces, \asymp and perhaps 𐀀 are possible. The latter sign would surely be an error. The alternative \asymp might be a determinative after the whole phrase *swdꜣ ib*.

2. I cannot parallel this variation from the usual formula, except in B.M. 10107, where precisely the same phrase occurs, l. 2.

3. See above, B.M. 10102, n. 3, p. 298.

4. Traces of l. 6 (see Pl. xxxiv, fig. 1) are visible, from which $\text{𐀀} \text{𐀁} \text{𐀂}$ can be certainly made out towards the middle of the line.

COMMENTARY.

It will be seen that we have here only the opening formulae of the original letter, which we have good reason to believe, from the name and titles of the person to whom it is addressed, must have contained information of archaeological if not of historical interest. The mention of this official constitutes the chief point of interest in the letter. The *imy-r pr wr n nswt*, "Great Steward of the King," Waḥtrenput, is an historical person known to us from a single inscription, which shows that he held office under the co-regency of Tuthmosis III and Hatshepsut³. The inscription, which was copied by de Morgan⁴, states that Waḥtrenput (whose title is here written $\text{𐀀} \text{𐀁} \text{𐀂}$) was "again prospecting" (for stone), and is to be found in the face of the Gebel el-Ḥamâm,

¹ Width 7 inches, length $4\frac{1}{2}$ inches. Originally, the papyrus was probably double its present length, but it has been torn in half in ancient times and large pieces are missing from the left-hand bottom corner. For the rest, the fragment is in poor condition, but the writing itself is very clear. *Recto* written on the horizontal fibres.

² What is left of the *verso* bears some rough accounts; see the Additional Note at the end of this paper, p. 311 and Pl. xxxiv, fig. 2.

³ *Urkunden*, IV, 394.

⁴ DE MORGAN, *Catologue des monuments et inscriptions*, I, 207, 10

a quarry on the East Bank of the Nile about 15 miles south of Kôm Ombo. Sethe suggested¹ that it was from this quarry that the door set up in Hatshepsut's reign in the great Temple at Ombos² came. Although the distance between the Gebel el-Ḥamâm and Ombos is slightly greater than that between Ombos and Silsilah, the Southern quarry offered the advantage of being higher up the river, and to some extent, therefore, facilitated transport. But we may believe that the colossal building schemes of Tuthmosis and Hatshepsut made it necessary to go further up than Silsilah, even for the stone for Thebes, in order to relieve the pressure at the nearer quarries. At all events, we can have little doubt, remembering the inscriptions at Shaṭṭ er-Rigâl and Silsilah, and the official positions of Aahmōse and his master, Peniati, that the present letter was in some way connected with the provision of stone, and that it may even have been written when Wažtrenput was in the South "prospecting" for new quarries; and we can endorse the view of de Morgan that Wažtrenput was looking for stone destined "probablement à la construction du sanctuaire de Karnak³." The name *Wažtrenput* (with pl. *w* written out) is, to say the least, very uncommon⁴— $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ occurs fairly frequently, but always as a woman's name⁵—and it is curious that it should be given to a man. It is only to be explained, in fact, by the assumption that he was named after the Queen, Hatshepsut, whose Nebti name was $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ ⁶. As the Queen would not have received this name till her coronation, after the death of Tuthmosis II, we must assume that Wažtrenput was born after she began to reign. Her reign only lasted for 22 years; but as Wažtrenput's inscription in the Gebel el-Ḥamâm mentions both rulers, Hatshepsut and Tuthmosis III, he must have been promoted to his office while the Queen was still alive. Taking into consideration the precocity of Eastern races, it is quite possible that, if he had been born at the beginning of the reign, he should be appointed to this post before the end, but the greater part of his official life must have been spent under Tuthmosis, unless we suppose that he had obtained office through the favour of the Queen, in which case he may well have lost it at her death. This, however, is improbable. His title, *imy-r pr wr n nswt*, while similar to one of Senmut's, is distinguished from it by the *n nswt*. For Senmut, Hatshepsut's favourite minister, included among his many titles that of $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$, by itself⁷ and variously defined, e.g., *imy-r pr wr* $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ (Neferurêr)⁸, $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ (with variants $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ and $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ alone)⁹; but never, so far as I can discover, $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$, the writing of which would have been quite consistent with the wholesale assumption of masculine titles by Hatshepsut. It seems probable, therefore, that Wažtrenput and Senmut were contemporaries for a part of Hatshepsut's reign and that the definitions after the title *imy-r pr wr* represent genuine distinctions in their offices, which did not conflict. Wažtrenput's then would be a personal appointment of Tuthmosis to the Great Stewardship of his own household, a post which, of small consequence during the queen's reign, would on her death be one with considerable power attached to it¹⁰.

¹ *Urk.*, iv, 394.

² *Urk.*, iv, 382, No. 118.

³ DE MORGAN, *op. cit.*, I, 206.

⁴ I have not been able to find a single occurrence of it elsewhere, excepting in the Nebti-name of Hatshepsut.

⁵ See LIEBLEIN, *Dict.*, *sub voc.*

⁶ Always written so, GAUTHIER, *Livre des rois (Mém. de l'Institut. franç. d'arch. orient. du Caire, xviii)*, 236 f., except once where the $\overline{\text{w}}$ is placed after $\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ instead of after $\overline{\text{w}}\overline{\text{z}}\overline{\text{t}}\overline{\text{r}}\overline{\text{n}}\overline{\text{p}}\overline{\text{u}}\overline{\text{t}}$ (*ibid.*, p. 245, No. xl). In the Gebel el-Ḥamâm inscription, Wažtrenput also spells his name thus, as opposed to the spelling of our papyrus.

⁷ *Urk.*, iv, 396, No. 2.

⁸ *Ibid.*, and HALL, *Hier. Texts*, v, Pl. 29, etc.

⁹ *Urk.*, iv, 398, 8.

¹⁰ This attempt to define the historical position of Wažtrenput takes as its basis Dr. Hall's reconstruction of the Tuthmosid succession in his *Ancient History of the Near East*, p. 286 f. as opposed to that of Professors Sethe and Breasted in *Untersuchungen* I and II respectively. It is, in fact, another piece of

Of the rest of the letter there is little to say. The opening formula, though differing slightly from that of the other letters, is sufficiently reminiscent of the Lāhūn letters of the M.K. and the Gurob letters of the Eighteenth Dynasty not to require further comment, than that it is here used, presumably, because Aaḥmōse is writing to a person in a high position; *swdꜣ ḫb* is a more formal and perhaps politer phrase than *nd ḫrt*. Two important points must be noticed, however, as bearing on the next problem for solution, which is: How does it happen that this letter and the Louvre 3230 b, though both¹ apparently written by Aaḥmōse for delivery to other persons, are found with letters sent to him¹? The first point is the writing of B.M. 10104. It is much larger than that of any of the other letters under discussion, and it has a peculiar formality about it which distinguishes it in a marked way from the handsome script of 10102, and the rather simple hand of 10107. Moreover, from a study of Maspero's facsimile alone, it is easy to see that *there is nothing in common between the writing of B.M. 10104 and Louvre 3230 b*. The second point is that on what remains of the *verso* of our papyrus there is no address², but, instead, notes of accounts, in a smaller and careless hand³. Taken in conjunction with the fact that the letter has come down to us with others received by Aaḥmōse, the presence of these accounts admits of one conclusion—that the letter was never dispatched. Two alternative explanations could account for this: Either the letter was written with the intention of delivery and was afterwards held up owing to later information received by the writer, or for some other reason which could make the letter unnecessary or insufficient. (If we had the whole of the original piece of papyrus, and it bore traces of the address, underneath or below the accounts⁴, we should be fairly safe in assuming this to be the correct explanation.) Or our present papyrus was never meant to be more than a draft from which the real letter would be copied. For the moment we can leave the point and simply note that, whatever the reason, Aaḥmōse's letter was never dispatched, but was turned over for use as scrap paper, in which capacity it was finally used to receive jottings of accounts.

[Louvre 3230 b.]

The second letter *from* Aaḥmōse, Louvre 3230 b, is addressed to the Treasurer Tai. Aaḥmōse calls him "his master," but as he uses the same phrase in addressing Waḥtrenput it is clear that this is a title of respect and does not mean that Aaḥmōse was necessarily under Tai's jurisdiction. The letter is about a slave who was in Aaḥmōse's charge and who has been taken away by Tai, and given to someone else. The contents of the letter may be discussed later on. For the moment we must notice three points. First, as in B.M. 10104, the addressee is a high official, one to whom Aaḥmōse referred as "his master." Secondly, unlike B.M. 10104, which opens in an essentially formal manner which is familiar to us, N. informs N., the Louvre papyrus opens with so unusual a phrase as to make Professor Peet question for a moment whether the document could really be a letter⁵. As he points out, the reading, *ḏḏ.tn*, gives us the phrase used in the New Kingdom "to evidence in favour of Hall's view; for if the other were true we should have to suppose that Waḥtrenput was appointed *ḫny-r pr wr n uswt* and sent down to the quarries at Gebel el-Ḥamām before he was seventeen, in order to allow for the five years of Tuthmosis III's reign which elapsed before Hatshepsut had herself recognized as full sovereign with him.

¹ The "exact parallel" to this (*cf.* PEET, *Journal*, XII, 73), in the Heḡanakht papers, has a special explanation (see WINLOCK, *Bull. Met. Mus.*, II, Dec., 35) which we have no evidence for assuming here.

² See note 4.

³ See Additional Note, p. 311.

⁴ The address would probably have been on the lost part, *cf.* above, p. 307.

⁵ *Journal*, XII, 73.

introduce a deposition in a court of law¹." He goes on to say that the contents of the letter and the fact that *dd·tn* is followed by *n nb·f*, shows that the phrase has not this technical sense here, and translates literally, "what so-and-so said." He thinks it natural enough that a man who obviously had something to say should have cut the empty salutations and introduced his business by the simplest statement. Thirdly, although the letter was complete, there was no address, since the *verso* has been gummed down on to mummy wrapping. But, with Professor Peet, we need have no doubt that this is not a model letter; therefore this letter was probably never meant to be dispatched.

The implication of all this is clear: B.M. 10104 is a real letter, written by Aaḥmōse himself, originally meant to be posted, but held back for some reason unknown: or, but less probably, a careful draft of a real letter; while Louvre 3230 b is a copy, eventually to be filed for reference, made by a junior scribe in the same office as Aaḥmōse, of a letter which had been written by Aaḥmōse². There is, then, nothing surprising in the letters being found together. The difference in the two hands is important, for assuming that Aaḥmōse himself wrote B.M. 10104³, he could not have written the Louvre papyrus; which accounts for the unusual opening phrase of the latter. That was the work of a clerk whose business it was to see that the contents of Aaḥmōse's letters were safely filed, but to whom the polite salutations used by him were of no importance. Further, it is impossible to believe, in the face of the salutations used in the other letters—even the most economical, that between the two equals, Ptaḥu and Aaḥmōse—that Aaḥmōse could have written to so superior a person as the Treasurer without the proper respectful salutations. Indeed, B.M. 10104 shows us that he must have departed from the common phrase of the day, *nd hrt*, and used a longer and more formal greeting in this case. These considerations may tempt us to see in the phrase *dd·tn* a slightly more technical meaning than we had supposed. Although we must translate "What so-and-so said," or similarly, *dd·tn* may well have been regarded by the Egyptians at this time as a stereotyped phrase for technical use in business correspondence: an interesting stage, in fact, in the evolution of its still more technical sense in legal documents⁴.

The contents of Louvre 3230 b are discussed by Professor Peet, who does not, however, consider that much can be inferred from them, in view of our ignorance of the subject of slavery and servitude in Ancient Egypt. But it is perhaps worth noticing some of the difficulties in the letter, only the general sense of which is clear. The main difficulties lie in the translation of the phrase, l. 4, *imi šsptw šbt·s ḥn·i*. Professor Peet translates, "Let her value be taken along with mine" and explains in a note that he assumes here that "Aaḥmōse is offering to do extra work himself to represent the contribution of the girl." But in that case, the sentence in l. 5 "Or let my lord command that I should be made to deliver her task, etc." is redundant, for the two alternatives make exactly the same offer. But in any case, is it conceivable that Aaḥmōse, a civil servant, and confidential clerk to Peniati (as the opening words of the letter

¹ *Journal, ibid.*

² Professor Peet suggests that letters of both sides in a business correspondence were eventually filed in a public office, and that this would explain the letters to and from Aaḥmōse being found together. The evidence of the two letters taken together favours the simpler explanation given above.

³ This assumption is justified, to my mind, by the full spelling of the name, Peniati, a spelling which is unique in these letters. Naturally Aaḥmōse would be likely to make the most of his high-sounding title, "Aaḥmōse of Peniati," particularly in writing to a superior.

⁴ Cf. B.M. 10107, l. 8, above *n dd·tn*, etc., where there is a suggestion of a semi-technical meaning, "allegation" perhaps.

remind us), would think for one moment of offering to do the work of a slave girl? We should perhaps get a more reasonable translation if we took *hnr-i* closely with *šbt-s* as “her exchange with me,” *i.e.*, the handing over of the girl to Aaḥmōse (in return for money), in which case the alternative suggestion, that Aaḥmōse should provide (vicariously) her work, would be opposed to the idea of price present in the word *šbt*. But we do not know if this is a possible Egyptian construction. Perhaps *hnr-i* may be taken with *šsptw* to mean “from me” (*lit.* “from my means”). At all events the sense of the passage must be that Aaḥmōse offers the price of the girl (which he implies should be small as she is only a girl!), or to provide someone else to do her work. It is curious and disappointing that two out of six letters from one man’s correspondence should both deal with disputes over slave girls and yet apparently have no connexion with one another. Their only possible common ground—the use of technical terms—has already been touched on (p. 306). We have not sufficient material here to justify further speculation.

ADDITIONAL NOTE.

Papyrus B.M. 10104, *verso*.

Aaḥmōse’s letter to Waḥtrenput (above p. 307) was not dispatched, and the back of the sheet on which it was written was eventually used to receive jottings of accounts (Pl. xxxiv, fig. 2). These consisted in a column and a half of entries. The entries, with the

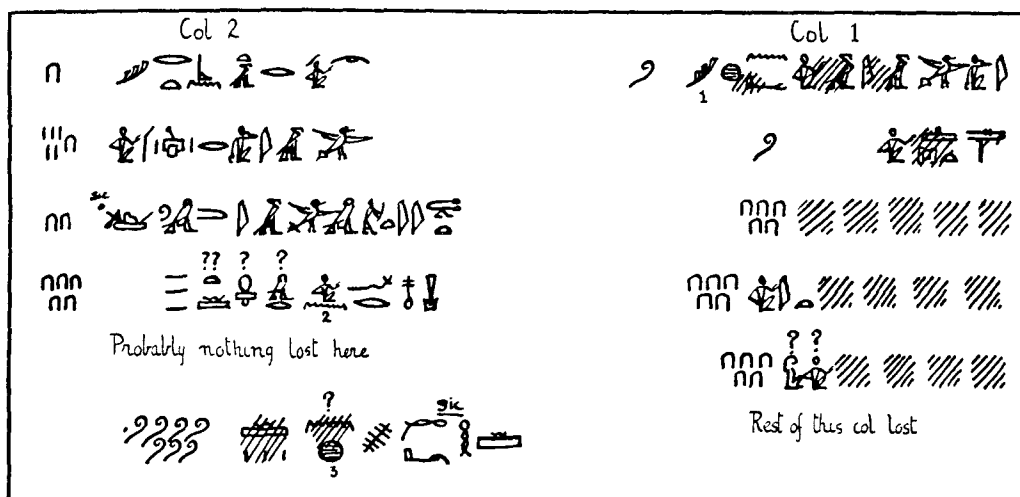






Fig. 1.

¹ See BRUGSCH, *Wörterbuch*, 660.

² The *n* appears to indicate the same type of relationship here as in “Aaḥmōse *n* Peniati.”

³ It is hardly possible to read , though this must have been intended.

exception of the third, give a person's name followed by a number—the latter referring to bundles (*nḥ*) of flax (*mḥ*). A little below the end of the half column is a line in a larger hand, giving the total number of bundles, namely 700. As our papyrus is only a fragment and the numbers on it only amount to 445, we may surmise that the lost piece contained at least four or five more entries in the first column. The letter of Aaḥmōse on the *recto* was therefore probably long enough to fill a normal “page.” The handwriting of these accounts is much clumsier and more irregular than that of the letter, but it appears to be of the same date. Fig. 1 is a transcription of the hieratic, so far as I can decipher it¹.

¹ The breaks in the papyrus make the reading of the last signs in the total uncertain; while the faintness of the writing similarly affects the signs after *Sḥ-nfr n* in column 2, l. 4. Later, Professor Peet saved me from reading the sign after  (col. 2, l. 2) as  instead of the correct .

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SILVER IN ANCIENT TIMES

By A. LUCAS

That silver is found in nature in two conditions, namely, as metal and in the non-metallic state as ore, is well known, but it will be shown that there is also a third condition, not generally recognized.

Native metallic silver is practically pure and occurs only in very small quantity, generally in the crystalline form, as needles, filaments, network or arborescent shapes, though also, but more rarely, massive, in nuggets and thin plates.

The principal ores of silver are silver sulphide, either alone or associated with the sulphides of antimony or arsenic, and silver chloride. These, however, yield only one-third of the world's supply of silver, the remaining two-thirds being obtained, not from silver ores proper, but from what are primarily lead, zinc and copper ores containing a very small proportion of silver (usually less than 0.5 per cent.), which may therefore be considered as low-grade silver ores.

The ore of silver for the working of which there is the earliest evidence is argentiferous galena, and the ancient mines of Greece, Spain, Britain and other places that are called "silver" mines were in reality lead mines, the ore being sulphide of lead (galena) containing a very small proportion of silver.

The most ancient "silver" mines of which there is any record are those of Mount Laurion in Attica¹ (Greece). The date when the mines were first worked cannot be traced, but they were possibly in operation in the time of Solon (seventh century B.C.), though, since he mentions the scarcity of silver, this would not indicate any considerable output. Xenophon² (fourth century B.C.) states that the Mount Laurion mines were ancient in his day and they certainly date from before 500 B.C., for about that period the royalties from the mines began to figure in the Athenian budget³, and in 484 B.C. they produced about 83,700 ounces of silver⁴. From this time onwards the mines are frequently mentioned by Greek writers until Strabo⁵ (first century B.C. to first century A.D.) wrote that they were exhausted. In this, however, he was mistaken, for they were re-opened by a French company about 1860 and are believed to be still working. The ore is argentiferous galena associated with sulphide of zinc (blende) and contains from about 40 to about 90 ounces of silver to each ton of lead^{6,7} (about 0.13 to 0.3 per cent.).

Herodotus⁸ (fifth century B.C.) mentions rich silver mines in the island of Siphanos (the modern Siphanto), one of the western Cyclades. There were also silver mines in Thrace that were being worked about the end of the fourth century B.C.⁶

In addition to the mines mentioned, other important ancient "silver" mines of which there are records are those of Spain and Britain.

¹ E. ARDAILLON, *Les mines du Laurion dans l'antiquité*, Paris, 1897.

² *Essay on the Revenue of Athens*, IV.

³ Aristotle, *Constitution of Athens*, XLVII.

⁴ H. C. HOOVER and L. H. HOOVER, Notes to translation of Georgius Agricola's *De Re Metallica*, 1912, 27.

⁵ *Geography*, IX, I, 23.

⁶ H. C. HOOVER and L. H. HOOVER, *op. cit.*, 28.

⁷ H. B. CRONSHAW, *Silver Ores*, London, 1921, 74.

⁸ III, 57.

The Spanish mines are referred to by Strabo¹, Pliny² and other classical writers. Strabo (first century B.C. to first century A.D.) in his account quotes Polybius (second century B.C.) and Posidonius (second century to first century B.C.), both of whom described the mines. Pliny states that silver was found in nearly all the Roman provinces, but that the best was obtained from Spain, and also that the mines opened by Hannibal (third century to second century B.C.) were still being worked: he refers both to veins of silver ore² and to silver being obtained from lead³. The Spanish silver ores include several kinds, the principal, however, being argentiferous galena, and in the Cartagena district, where the mines exploited by Hannibal are supposed to have been situated, the ore is entirely argentiferous galena.

The "silver" mines of Britain, the ore of which was also argentiferous galena, were actively worked by the Romans. Strabo⁴ (first century B.C. to first century A.D.) mentions British silver.

Silver also occurs in western Asia: in Anatolia and Armenia⁵ there are many ancient mines, the working of which unfortunately cannot be dated, the principal being situated in the provinces of Trebizond, Erzerum, Diarbekr, Adana and Hudavendighar. The silver is mostly in the form of argentiferous galena associated with sulphide of zinc. In Georgia and Caucasia there are also lead-zinc mines containing silver⁶, but whether these were worked anciently or not cannot be stated. In Persia, too, lead ores containing silver are widely distributed^{7,8}, but again it is not known whether they were exploited anciently. Lead ores containing a small proportion of silver are found in Egypt at Gebel Ruşâş⁹ (a few miles inland from the Red Sea and some 70 miles south of Kōşêr) and also about 2 miles south of Safaga Bay on the Red Sea¹⁰. The former consist of mixed carbonate and sulphide of lead (galena) associated with carbonate of zinc, and the amount of silver is so small that it has never been found worth while to express it numerically; the latter is galena and contains about 3 ounces of silver to the ton of lead¹⁰. Lead ores occur, too, in small quantities in other localities, as at Ranga on the Red Sea coast⁹, near Aşwân⁹ and in Sinai¹¹, but whether these contain silver is not known, though it would be very astonishing if they did not, since lead ores practically always do contain a little silver.

Although silver occurs in such small proportions in argentiferous galena (usually less than 0·5 per cent.) and though at first sight it might appear strange that its presence should have been detected anciently, the discovery was almost inevitable, once galena was known. This mineral, which is heavy and metallic-looking and therefore does not readily escape notice, was used in Egypt from predynastic times¹² onwards for painting round the eyes; it easily yields lead on heating in a wood or charcoal fire and this fact must have been discovered soon after galena was first used, as small objects of lead have been found in predynastic graves¹². When lead was produced from galena it seems

¹ *Geography*, III, 11, 8, 9, 10.

² *Natural History*, XXXIII, 31.

³ *Op. cit.*, XXXIV, 47.

⁴ *Geography*, IV, 5, 2.

⁵ H. A. KARAJIAN, *Mineral Resources of Armenia and Anatolia*, New York, 1926, 149-160.

⁶ D. GHAMBASHIDZE, *Mineral Resources of Georgia and Caucasia*, London, 1919, 44-49.

⁷ Geog Section, Naval Intell. Division, Admiralty, London, *Geology of Mesopotamia and its Borderlands*, 69.

⁸ MOUSTAFA KHAN FATEH, *The Economic Position of Persia*, London, 1926, 32.

⁹ A. LUCAS, *Ancient Egyptian Materials*, 102-3.

¹⁰ C. J. ALFORD, *Gold Mining in Egypt*, in *Journ. Inst. Mining and Metallurgy*, 1901, 13.

¹¹ G. W. MURRAY, *The Hamada Country*, in *Cairo Sci. Journ.*, VI (1912), 268.

¹² W. M. FLINDERS PETRIE, (a) *Descriptive Sociology, Ancient Egyptians*, 49; (b) *Prehistoric Egypt*, 27, 43.

highly probable that it was not always removed at once from the fire and since the metal oxidizes when strongly heated and the molten oxide is absorbed by any porous material, such as ashes, on which it may rest, leaving behind the silver it contains in the form of a tiny metallic bead, it is reasonable to suppose that sooner or later a quantity of lead was oxidized and that the oxide disappeared, leaving the silver. The amount of silver, however, produced from a small quantity of lead would have been so minute that its presence would not ordinarily have been noticed and it would not have been until a considerable amount of lead rich in silver was oxidized that the residue of silver would have been sufficient in amount to have attracted attention. When and where this discovery took place cannot be stated, but it is likely to have been some considerable time after lead was first produced and almost certainly not in Egypt, because of the poorness in silver of the Egyptian lead ores. The earliest evidence for the employment of the method that can be traced is in Greece about the seventh century B.C. It is probable that at first the lead was entirely wasted, but eventually it would be discovered that the lead oxide need not be discarded, since the lead it contained could easily be recovered.

It is frequently stated that the silver that occurs in nature as metal is not in sufficient quantity to account for the amount known to have been used in ancient times and that, therefore, all such silver must have been obtained from an ore¹. It would follow from this, if the statement were true, that from the earliest period in which silver was used, not only must silver ore¹ have been known, but also the method of extracting the silver. This statement, however, contains two fallacies, arising from the neglect to define what is meant either by native silver or by ancient times. Admittedly, such native metallic silver as the pure or practically pure variety already described is not found in sufficient quantity to have provided even the small amount of silver employed in the earliest days of the use of the metal. The alternative, however, is not an ore¹, since as already shown silver was not extracted from ore¹ until comparatively late, but in the writer's opinion it was a natural alloy of gold and silver, of the nature of electrum, containing sufficient silver to have a white or practically white colour. That the early Egyptian silver consisted of such an alloy is evident from the following analyses of early gold, electrum and silver objects. The division between gold and electrum is entirely arbitrary and when the alloy contains less than 20 per cent. of silver it is here called gold and when it contains 20 per cent. or more of silver and is of a light-yellow colour it is called electrum, which accords with Pliny's definition of electrum².

Ancient Egyptian Gold.

	A	B	C	D	E	F	G	H	I
	%	%	%	%	%	%	%	%	%
Gold	79.7	84.2	84.0	78.0	81.7	92.3	92.2	90.5	92.7
Silver	13.4	13.5	13.0	18.0	16.1	3.2	3.9	4.5	4.9
Copper	nil	nil	nil	—	trace	nil	nil	nil	—
Not determined ...	6.9	2.3	3.0	4.0	2.2	4.5	3.9	5.0	2.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ *I.e.* argentiferous galena or silver sulphide or chloride.

² *Natural History*, xxxiii, 23.

Ancient Egyptian Gold.

	J	K	L	M	N	O	P	Q
Gold	90.0	82.9	85.9	96.4	82.3	72.1	89.5	99.8
Silver	—	16.6	13.8	1.9	14.3	17.2	11.2	—
Copper	—	0.5	0.3	pres.	1.5	13.1	nil	—
Not determined ...	10.0	—	—	1.7	1.9	—	—	0.2
	100.0	100.0	100.0	100.0	100.0	102.4	100.7	100.0

Electrum.

	<i>Ancient Egyptian</i>						<i>Not Egyptian</i>			
	R	S	T	U	V	W	X	AA	BB	CC
Gold	80.1	78.7	77.3	78.2	72.9	67.0	71.0	60.0	—	—
Silver	20.3	20.9	22.3	21.1	20.5	25.0	29.0	30.0	23.4	33.4
Copper	—	—	—	—	pres.	8.0	—	10.0	—	—
Not determined ...	—	0.4	0.4	0.7	6.6	—	—	—	76.6	66.6
	100.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Ancient Egyptian Silver.

	DD	EE	FF	GG	HH	II	JJ	KK	LL
Gold	38.1	8.9	14.9	pres.	8.7	8.4	5.1	3.2	17.9
Silver	69.4	90.1	74.5	69.2	82.5	81.9	90.2	92.4	82.1
Copper	1.5	1.0	—	—	8.9	4.3	4.5	3.9	—
Lead	—	nil	—	—	—	—	0.2	0.5	—
Not determined ...	—	—	19.6	30.8	—	2.4	—	—	—
	100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.0	100.0

A, B, C, First Dynasty. Analyses by Dr. Gladstone, F.R.S. In *The Royal Tombs of the Earliest Dynasties*, W. M. FLINDERS PETRIE, II, 40.

D, E, Sixth Dynasty. Analyses by Dr. Gladstone, F.R.S. In *Denderah*, W. M. FLINDERS PETRIE, 62-3.

F, G, Eleventh Dynasty; H, I, J, Twelfth Dynasty; R, S, T, U, FF, Eleventh or Twelfth Dynasty; Q, Persian period. Analyses by M. Berthelot. *Sur l'or égyptien*, in *Ann. Serv.*, II (1901), 157-63.

K, L, Twelfth Dynasty; GG, Eleventh or Twelfth Dynasty. Analyses by M. Berthelot. *Étude sur les métaux*, in *Fouilles à Dahchour*, J. DE MORGAN, 145-6.

M, N, O, P, V, HH, II, Eighteenth Dynasty. Analyses by W. B. Pollard. In *The Tomb of Yuaa and Thuiu*, J. E. QUIBELL, *Cairo Cat.*, 78-9.

W, JJ, Eighteenth Dynasty. Analyses by Dr. Alex. Scott, F.R.S. In *The Tomb of Tut-ankh-Amen*, CARTER, II, 210, 211.

X, Eighteenth or Nineteenth Dynasty; KK, Nineteenth Dynasty; LL, fifth to fourth century B.C. C. R. WILLIAMS, *Gold and Silver Jewelry and Related Objects*, No. 45, p. 29 and No. 81.

DD, probably early dynastic. Analysis by C. Friedel. In *Fouilles d'Abydos*, E. AMÉLINEAU, 274.

EE, Third Dynasty. Analysis for the writer by Dr. H. E. Cox, F.I.C. From the tomb of Hetepheres at Gizah, discovered by Dr. G. A. Reisner.

AA, fourth millennium B.C. From Ur. C. L. WOOLLEY, *The Antiquaries Journal*, VIII (1928), 24.

BB. From the Royal Tombs at Mycenae. Analysis by Dr. Percy. In *Silver in Roman and Earlier Times*, W. GOWLAND, *Archaeologia*, LXIX (1920).

CC. From Ilios. Analysis by Dr. Roberts Austin. In *Silver in Roman and Earlier Times*, W. GOWLAND, *Archaeologia*, LXIX (1920).

From a critical examination of these analyses the following facts emerge:

1. The gold was essentially an alloy of gold and silver containing approximately from 72 to 96¹ per cent. of gold and from 3 to 18 per cent. of silver, with occasionally a little copper.

2. The electrum was essentially an alloy of gold and silver containing approximately from 60 to 80 per cent. of gold and from 20 to 30 per cent. of silver, with occasionally a little copper.

3. The silver was essentially an alloy of gold and silver containing approximately from 3 to 38 per cent. of gold and from 60 to 92 per cent. of silver, with occasionally a little copper.

It is evident, therefore, that the gold, electrum and silver as used anciently, certainly in Egypt and probably elsewhere, were all varieties of the same alloy and only differed in the relative proportions of the principal constituents.

That the gold and electrum were natural products that still occur in Egypt² will generally be admitted, and it is not unreasonable to suppose, therefore, that the silver was also a natural product, though the fact that an alloy of gold and silver, containing so large a proportion of silver as to have a white colour, is still to be found is not usually recognized. Nowadays, however, such an alloy is classed as a poor quality of gold and its real character is masked by the manner in which it is reported. Anciently the case was very different; silver was scarce and was several times the value of gold, and hence it would have been the object of diligent search and even the smallest amount found would have been highly prized and would almost certainly have been worked until it was exhausted. Alford³ gives the results of the assay of 26 specimens of modern Egyptian gold from quartz, and when the ratio of silver to gold is calculated it is found that in 15 instances this is 1 part or more of silver to 1 part of gold, the highest ratio being 3.3 parts of silver to 1 part of gold. All these specimens would be silver-white, since a silver-gold alloy containing 50 per cent. or more of silver has a white colour. Mellor⁴ mentions a specimen of natural silver-gold alloy from Norway that contained 28 per cent. of gold and therefore, by inference, 72 per cent. of silver and this, also would be white.

Another reason, in addition to its composition, for considering the most ancient silver to have been a natural product and not to have been obtained artificially from

¹ The one specimen of the Persian period with 99.8 per cent. of gold is exceptional.

² A. LUCAS, *Ancient Egyptian Materials*, 84-94.

³ C. J. ALFORD, *A Report on Ancient and Prospective Gold Mining in Egypt*, 1900, appendix.

⁴ J. W. MELLOR, *Inorganic and Theoretical Chemistry*, III (1923), 299.

ore, is that at the period when silver was first employed (in Egypt in predynastic times) metallurgy was in its infancy and it is highly improbable that even the existence of silver in argentiferous galena (which was the earliest silver ore used) should have been known, much less the method of separating it. Such knowledge as this would only be acquired after galena rich in silver had long been in use for the production of lead.

Apart, however, from theoretical considerations, it may be shown that the most ancient silver is not of the nature or purity of that separated from ore. Thus, some of the ancient Egyptian silver is not of a uniform white colour, as would be the case had it been obtained from ore, when it must necessarily have been melted and well mixed, but has yellowish patches, manifestly due to the unequal distribution of the gold present. This has been observed by the writer in silver objects from as early as the beginning of the Fourth Dynasty and as late as the end of the Eighteenth Dynasty. Also, the analyses of silver objects of a date corresponding to the period when it is known that silver was obtained from argentiferous galena show it to contain much less gold than the earlier examples (the small amount present being that occurring in the galena) and also a small proportion of lead. Further, metallic lead, although known, was very little employed until a comparatively late period, whereas had lead ore been extensively mined and smelted for the production of silver, lead would almost certainly have been in fairly common use. The following analyses bring out clearly the points mentioned:

		<i>a</i>	<i>b</i>	<i>c</i>
		%	%	%
Silver	... ..	95·6	95·6	95·2
Gold	... ..	0·2	0·3	0·5
Copper	... ..	3·4	3·2	3·4
Lead	... ..	0·2	0·4	0·3
Iron	... ..	0·4	0·1	0·1
Not determined	... ..	0·2	0·4	0·5
		100·0	100·0	100·0

a. Silver bar from the "burnt" city of Troy. *b.* Silver vessel from Mycenae. *c.* Roman patera. W. GOWLAND, *The Metals in Antiquity*, 1912, 265-6.

Seven other silver objects of late date analysed by Gowland¹ contained from 92·5 to 95·6 per cent. of silver, but whether they contained lead is not stated.

The two Egyptian silver objects of the Eighteenth and Nineteenth Dynasties respectively, the analyses of which are given previously under the letters JJ and KK, are very ambiguous, the proportion of gold present suggesting a natural alloy, while the lead seems to point to their derivation from argentiferous galena. At the date represented by these specimens they need not have been of Egyptian origin and might well have been imported and if so, and if they were derived from silver-lead ore, this throws back the working of argentiferous galena to a date earlier than has yet been supposed. The questions raised, however, must remain undecided until detailed analyses of many more objects are available.

Conclusions.

1. That the earliest Egyptian silver and, by inference, also that of Mesopotamia, was a natural alloy of silver and gold containing sufficient silver to have a white colour, and was not obtained from an ore².

¹ W. GOWLAND, *The Metals in Antiquity*, 266.

² *I.e.*, argentiferous galena or silver sulphide or chloride.

2. That the earliest ore employed for the production of silver was argentiferous galena, but this was not used as a source of silver until a comparatively late period in the history of the metal.

3. That silver was obtained from argentiferous galena by the Greeks about the seventh century B.C., but of any earlier production of silver from this ore there is as yet no evidence, though the ore occurs extensively in western Asia and its use would have been possible.

A LATIN PETITION OF ABINNAEUS (PAPYRUS B.M. 447)

BY SEYMOUR DE RICCI

With Pls. xxxvi and xxxvii.

It is not generally known that the Abinnaeus archives contained, in addition to the Latin papyrus at Geneva, a second and longer document in Latin which has belonged for some thirty-five years to the British Museum (Papyrus 447). Pl. xxxvi.

It has been twice briefly described by Sir Frederic Kenyon¹, who, however, has never published the text doubtless owing to the considerable difficulties encountered in deciphering the badly damaged papyrus.

I first copied the text in January 1901 and revised it on several occasions, notably in 1905. Subsequently, while preparing their new edition of the Abinnaeus documents, Messrs. H. I. Bell and Victor Martin made independent copies of the same papyrus and kindly placed them at my disposal.

The text given hereafter is founded on my earlier copies but embodies many readings of the more illegible passages first correctly deciphered by Martin or by Bell. I myself tested their readings in 1924, with the assistance of Bell.

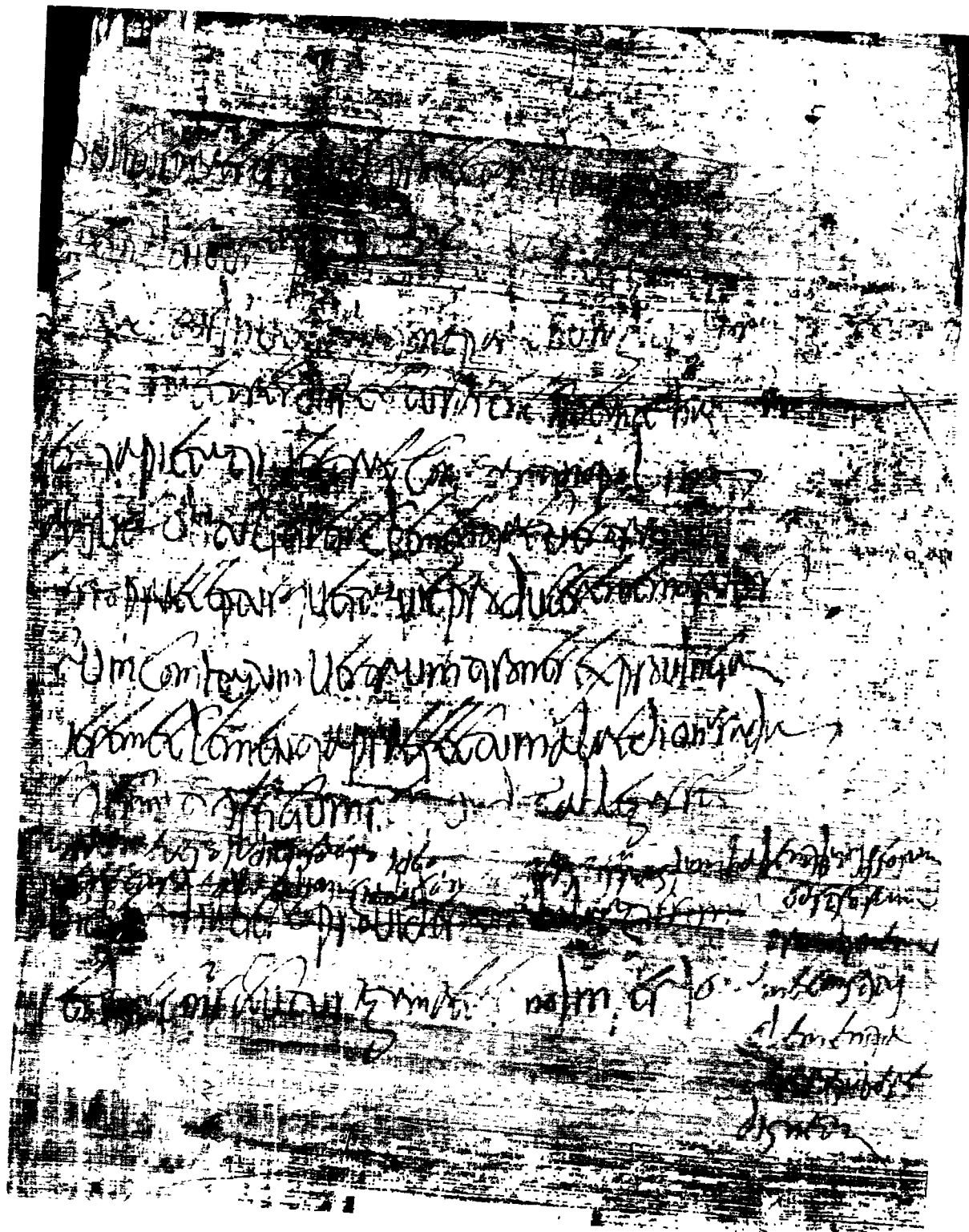
The novice will be surprised that it has taken thirty years to read a papyrus and that even now much of it remains undeciphered.

If both Martin and Bell, and myself, now venture to print a provisional text, it is in the hope that other workers may be more successful than we have been in reading and interpreting the document, which is one of the most important extant examples of Latin cursive dating from the middle of the fourth century.

The following is an attempt to transcribe the above copy and to fill in a few of the more obvious gaps. Pl. xxxvii.

1. *Clementia piet[at]is uestrae, Domini per[fectissimi? ... gap of at most 30 letters]*
2. *Constanti et Con[sta]ns, uictores semper [about 30 letters]]bus suis praesertim ex protectoris, immo his*
3. *qu[i] ala[c]riter [o]bsequium suum exh[iberint? gap of about 18 letters]ciata [.....]ere uidentur, provide[n]s c[a]sus uenit*
4. *ego rem que[....]e.... excu[s]o ti.io [14 letters] gente.[....]e.e. traditus in uexillatione Parthusagittariorum*
5. *degentium Diosp[ol]i prouincia[e] T[h]e[ba]i[d]os super[i]oris de.eo se[.....] triginta et tres, directus a Senecione, antehac*
6. *comite limitis e[i]usdem prouinciae, ducere Içiniorum gent[e]s refug[i] ad sacra uesti<gi>a pietatis uestrae Constantinopolim*

¹ *Catalogue of additions to the manuscripts in the British Museum in the years 1888-1893*, p. 449, n. CCCCXLVII and *Greek papyri in the British Museum*, II, p. xxxix, n. CCCCXLVII (see p. 267). See also C. HAEERLIN, *Berl. Phil. Woch.*, XIX (1899), col. 294.



7. *ed. f. r. l. i. m. cum legatis memoratae ge[ntis] lim[it]is et c[omi]te eiusdem lim[i]l[i]s, atque obtulitis eis clementiae uestrae*
8. *r. ee. duce[ri?]o diuinitas uestra uenerandam purpuram suam ado[rar]e [i]ussit, praeceptusque itaque producere memoratos*
9. *Le[cinios?] i[n] pa[triam] suam, cum quibus trienni tempus exigi, remeandoque [ad] sa[crum] comitatum uestrum tirones ex provincia*
10. *Thebaid[os] [e]t [a]l[i]os quos Hierapoli tradidi, et ita data uacatione mihi [promo]- uere me clementia praefectum alae Dionusada*
11. *pro[ui]nciae Aegup[ti]? uestra dignata est, uerum insin[...]*m* s...*itoer*....c.o comiti officium respondit allegasse*
12. *a[li]osq[ue] [h]uiusmodi [e]pistulas homines [...d]de...] "c[u]mq[ue]...] ex suffragio eo spo[...]*erere* me uero iudicio sacro ideo"*
13. *sol[i]i contemplatione memoratorum [laborum meorum et quos sedes ...o uide[o]r] habere, prouidere mihi largissima*
14. *pieta[s] uestra dignetur unde possim cotidianum uictum adquir[ere]] "iurta [11 letters]es uestros tribu[...]*pr*]aefecturae alae Dionusiados am.... per suffragium habentibus ipsorum castrorum promotionem me constitui clementia uestra iubere dignetur" et hoc consecutus agam aeterno imperio uestro maximas gratias.*

The following notes are reduced to a minimum.

Line 5. *Diosp[ol]i* was first read by Bell and Martin.

Line 6. *Liciniorum*. The name of this Bedouin tribe is very doubtful; Martin thought he could read it as *Lemniorum*. It apparently occurs again at the beginning of line 9 where the second letter is clearly an E.—*Vesti<gi>a* was first read by Bell and Martin.

Line 11. AEB[.]VP⁻. *Aegup[ti]* as read by Martin is possible; TEB[S]VP⁻ though unlikely would also suit the traces of the letters.

It is not known exactly in which province Dionysias was in A.D. 350. There are grounds to believe that lower Egypt at one time was called *Aegyptus* in opposition to *Thebais*. In the same line *oer*....c.o might perhaps be read *uer[o iudi]c[i]o*.

The deletions and insertions in lines 12—14 prove this papyrus to contain a rough draft of the petition actually sent by Abinnaeus to Constantinople.

The language he uses, with the many involved periphrases, may be paralleled from many passages in the Codex Theodosianus.

APPENDIX.

Before passing on Mr. de Ricci's article to the editor I looked again at some of the more difficult places, with, I regret to say, very little result, but I think it well to add a few notes. It was unknown to Mr. de Ricci that the transcript by Martin and myself had profited in one or two places by the assistance of Professor Hunt, who looked at the papyrus on a brief visit to the British Museum; but he had no time for a systematic examination.

Line 1. After *per* part of a downstroke is visible which suggests *f*, thus tending to confirm *perfectissimi*.

Line 4. After *que*, almost certainly *o*. This is difficult to fit into the context if *rem que* is read, but the *r* is by no means certain.

Line 5. Instead of *de eo se* either Martin or I, I think the former, read *ue[s]tr[a]e*, and this still seems to me at least as good as de Ricci's reading.

Line 6. *Liciniorum* seems to me very probable, but between the visible upstrokes read as *l* and *i* there seems to be a stroke curving backwards to the left which is not easy to reconcile with *l* and suggests *b*. *Biciniorum* would be, so far as I am aware, as unrecorded a name as *Liciniorum*, and against it may be alleged the beginning of line 9 if de Ricci's reading there is accepted, but see note on that line. The reading *gent[is]* I cannot accept; *gentis* seems to me clear. After it one would expect *refugas*, and *as* seems to me to suit the very minute traces at least as well as *i*. The space is not too ample but, I think, sufficient.

Line 7, beg. A verb should come here. I think *eo per[er]xi* could be read, but it would hardly fill the space before *cum*.

Line 9. An alternative to which I personally am inclined is *le[gatos]* (cf. line 7). The lower part of *g* might be expected to be visible, since the surface of the papyrus is not much damaged, but in several cases the ink has disappeared to a surprising extent, and I am not sure that there is not a trace which suits a portion of the curve of *g*.

Line 10. *Thebaid(os)* read by Hunt before we had seen de Ricci's transcript, where the reading was also given.

The deletions and insertions prove, as Mr. de Ricci says, that the document is a draft: but the regular, handsome hand, the neatness of the upper portion and the quality of the papyrus make it probable that it was not originally so intended; that in fact it was begun as a fair copy but changed to a draft owing to an error or (more probably) dissatisfaction on the part of Abinnaeus or the clerk with the wording.

H. I. BELL.

DIPLOMATIC TRANSCRIPT

CLEMENTIPIET[....]VESTRAEDOMINIPER[at most 30 letters]
 CONSTANTIETCON[...]NSVICTORESSEMPER[about 30 letters]BVSSVISPRAESERTIMEXPROTECTORISIMMOHIS
 QV. ALA. RITER[.]BSEQVIVMSVVMEXH[about 18 letters]CIATA[.....]EREVIDENTVRPROVIDE. SC. SVSVENIT
 EGOREM QVE[....]E....EXCV. OTI. IO[about 14 letters]GENTE.[...]E. E. TRADITVSIN VEXILLATIONE PARTHVSAGITTARIORVM
 5 DEGENTIVMDIOSP[.]IPROVINCIA[.]T. E. . I. OSSVPER. ORISDE. EOSE[.....]TRIGINTAETTRESDIRECTVSASENECIONEANTEHAC
 COMITELIMITISE. VSDEMPROVINCIAEDVCERELIÇINIORVMGENTISREFVG[.]ADSACRAVESTIPIETATISVESTRAECONSTANTINOPOLIM
 ED. F. R. LIMCVMLEGATISMEMORATAEGE.... LIM. . ISETC[.]TEEIVSDEMLIM. T. SATQVEOBTVLITISEISCLEMENTIAEVESTRAE
 R. EE. DVCENA. . ODIVINITASVESTRAVENERANDAMPVRPVRAMSVAMADO...E. VSSITPRAECEPTVSQVEITAQVEPRODVCEREMEMORATOS
 LE....I... TRIAMSVAMCVMQVIBVSTRIENNITEMPVSEXIGIREMEANDOQVE.... CRVMCOMITATVMVESTRVMTIRONESEXPROVINCIA
 10 THEBAID. . T. L. . SQVOSHIERAPOLITRADIDIETITADATAVACATIONEMIH[....]VEREMECLEMENTIAPRAEFECTVMALAEDIONVSADA
 PRO...NCIAEAEB[.]VP~VESTRADIGNATAESTVERVMINSIN[...]MS...ITOER.....C. OCOMITIOFFICIVMRESPONDITALLEGASSE
 C. MQ....EXSVFFRAGIOEOSPO.....EVE REME VEROIVDICIOSACROIDEO
 A[.]OSQ[.]E[.]VIÛSCEMODI. PISTVLASHOMINES[.....DDE...]
 IVXTA[.]...[.....]ESVESTROSTRIBV..[...]AEFECTVRAEALAEDIONVSIADOSAM....PERSVFFRAGIVMHABENTIBVSIPSORVM
 SOLITICONTEMPLATIONEMEMORATORVM[[LABORVMMEORVMETQVOSSEDES... OVIDE. RHABEREPROVIDEREMIHILARGISSIMA]]
 [[PIET. SVESTRADIGNETVRVNDEPOSSIMCOTIDIANVMVICTVMADQVIR...]]ETHOCCONSECVTVSAGAMAETernoIMPERIO
 VESTROMAXIMASGRATIAS

CASTRORVM
 PROMOTIONEM
 MECONSTITVI
 CLEMENTIA
 VESTRAIVBERE
 DIGNETVR

A. G. K. HAYTER, M.A., F.S.A.

Died October 15th, 1927

A. G. K. Hayter was born in 1863 and educated at Highgate School. He was a Classical Scholar of Queens' College, Cambridge, and took Honours in the Classical Tripos, followed by Diplomas in German and French. He then settled down to the profession he had chosen, that of a schoolmaster, and for nearly twenty-five years he taught modern languages, first at King William's College in the Isle of Man, then at Eastbourne College, and finally at Forest School, Walthamstow. As early as 1901, however, he had become interested in Egyptology and attended classes at University College, London, on the archaeology and language of Ancient Egypt. Consequently, when in 1910 he found himself in a position to renounce teaching, he was fitted to assist Sir Flinders Petrie in excavations at Hawârah and Memphis 1910-11: in the winters of 1912-13 and 1913-14 he worked with Quibell at Saqqârah.

The war found him far past military age, but capable of useful work, for his acquaintance with German enabled him to serve at first as censor of letters in a Prisoners of War Camp, from which he was soon transferred to the Head Censor's Office in London, where the knowledge of Modern Greek which he had acquired as a hobby proved of great value, in addition to his knowledge of more usual languages.

In 1919 he had to face the problem of an income diminished in value by economic changes and courageously returned to schoolmastering. Release however was at hand, for in the winter 1921-22 he was in Egypt excavating with the Egypt Exploration Society at Tell el-'Amarnah, and in 1922 he was appointed to lecture in Egyptology for the Board of Extra-Mural Studies of Cambridge University. During the next few years he proved himself not only an indefatigable but a highly successful lecturer: he knew his subject, he had personal acquaintance with Egypt and with excavation, and he had for Egyptology an enthusiasm which none of his audience could fail to catch.

The winter of 1925-26 found him again in Egypt with the expedition of the University of Michigan at Kôm Aushîm in the Fayyûm. He resumed his lecturing on his return to England but was unable, owing to illness, to complete the courses which had been arranged for the following winter. His condition went from bad to worse, and he died on October 15th, 1927.

Such briefly was his career as an Egyptologist. But this was not all. He was an enthusiastic and learned student of Roman Britain. As early as 1912 he had excavated at Wroxeter, and between that time and the year of his death he worked at Richborough, Kenchester, Ariconium, Capler Camp, Caer Llugwy and Carnarvon. His work on these sites is recorded in a series of articles in various archaeological journals.

On the Egyptian side his published work seems very modest in quantity, for much of it is embodied in publications on which his name does not even appear as part author. Thus he provided some of the material for *Roman Portraits and Memphis (IV)*, and whole sections of *The City of Akhenaten I*, as one of the authors can testify, came straight out of his beautifully kept field note-books. He shared with Quibell the authorship of *The*

Teti Pyramid, North Side, and a corpus which he made of Romano-Egyptian pottery, found at Kôm Aushîm, will, it is to be hoped, be used in the publication of that site by the University of Michigan. Meanwhile a copy of this corpus is in the hands of Mrs. Hayter at 39 Netherhall Gardens, London, N.W. 3, where it lies at the disposition of any future excavator who could make use of it.

A work of his, however, which is certainly of more magnitude, and perhaps of greater importance than any of these, is one which has not yet seen the light. Since 1914 he had been compiling a corpus of the potters' stamps on Samian ware. His list is the most complete in existence and was used for reference by scholars in all parts of the country. It is in good order, the stamps being drawn in facsimile, for Hayter was, among other things, a clever draughtsman. It is very much to be hoped that those interested in Roman Britain will see to it that this valuable work does not remain unpublished. For the present it is being kept up to date and added to by Mr. Hayter's son, in whose hands it remains just as freely accessible to those who wish to make use of it as it did during his father's lifetime.

Those studies which are supposed to be without direct application to the needs of modern life lead in these days a precarious existence, and they only survive at all by the enthusiasm and devotion of those who profess them. There could not be a more enthusiastic or devoted Egyptologist than Hayter. Nothing was too much trouble, and if he had the faintest suspicion that a piece of work which he had done could be improved upon, however minutely, it was thrown ruthlessly aside and the whole done over again from start to finish. He was a kind and generous camp-fellow, and, if he had a fault, it was that he expected too much of himself and allowed himself too little mental and physical relaxation. Yet this spirit of modest self-sacrifice was not a mere by-product of his love of archaeology, which was great, but lay deep in the man himself, and it is certain that if one could question his old pupils one would find that he was no less devoted as a teacher than he was as an archaeologist.

T. E. P.

NOTES AND NEWS

Field work is to begin at Erment early in November. The party will be under the direction of Dr. H. Frankfort, and will include Mr. S. R. K. Glanville, Mr. A. W. Shorter, who has just taken his final Schools at Oxford, and Mr. J. D. Pendlebury, who has been excavating for the British School at Athens in Macedonia, and joins as a volunteer. Mr. Mond has generously given leave to Mr. W. B. Emery to join the expedition. The work will start with an attempt to find the burial-place of the sacred Buchis-bulls, the existence and position of which were surmised by Mr. Mond and Mr. Emery from their discoveries made last year. Hermonthis, the ancient town on the site of Erment, was closely related to the dynasties of the Middle and New Kingdoms, most of whose kings, including Akhenaten, were crowned there. Town and temple ruins, as well as cemeteries, await exploration, for the site has never been worked by a scientific expedition, having been neglected owing to its proximity to Thebes, which has absorbed the attention of archaeologists.

In the beginning of January the expedition will be transferred from Erment to Tell el-'Amarnah. The party there will include Mr. E. B. O'Rorke as architect. It is intended to complete the planning of what remains of the large Aten Temple and to continue the excavation of the northern part of the town.

The work of the Archaeological Survey is to be continued at Abydos. Miss Calverley has made considerable progress in copying the reliefs and inscriptions in this country and hopes to recommence her work in Abydos about the middle of September, probably remaining in Egypt for nearly six months.

The Newton Memorial volume, *The Mural Paintings of Tell el-'Amarnah*, will be ready for publication before the end of the year. Proofs of some of the colour plates were exhibited at the Oriental Congress at Oxford and evoked great admiration. The manuscript of the Naville Memorial volume, *The Cenotaph of Seti I at Abydos*, will also be ready this autumn, so that the book should go to press at the beginning of the new year.

A series of lectures is being arranged for the winter, the majority of which will deal with Egyptian history during the decay and after the fall of the native dynasties. As an experiment, for the benefit of those to whom the evening lectures are impracticable, two of this series will be given in the afternoon.

That the Congress of Orientalists held at Oxford in the last week of August was an unqualified success will not be denied by anyone who had the good fortune to be there. The attendance of foreign delegates and members was very numerous. In the Egyptian section this was especially noticeable. America sent us Professor Breasted, France

Professor Moret and Mlle Baud, Belgium Professor and Madame Capart and Mlle Werbrouck, Germany a long list of scholars, among whom were Drs. Steindorff, Spiegelberg, Hess, Roeder and Grapow, while from Denmark we had Professor Lange and Dr Till, and from Czecho-Slovakia Dr. Černý.

Our own country was well represented, and among the most crowded meetings were those at which papers were read by Professor A. H. Gardiner and Dr. Hall. Professor Gardiner read on the Sinaitic script and the origin of the alphabet, giving some details of the three most recently discovered inscriptions in the new script, and reviewing shortly the work of other scholars on the subject since the time of his first publication of his discovery in this *Journal*. The room provided for the reading of this paper proved too small for the numbers who wished to hear Dr. Gardiner, and many people were unable to obtain admission. Dr. Hall's paper dealt with the ever-increasing cost of archaeological publications, more especially reports of excavations and editions of papyri. A resolution, the adoption of which would tend to mitigate this evil, was submitted to, and carried in, all sections of the Congress.

Professor Newberry's paper on the crook and flail (more correctly *ladanisterium*) of Osiris, which was illustrated by some interesting exhibits, we hope to print later in this *Journal*. Judging from what one heard on Friday there seemed every prospect of the Congress being unofficially continued over the week-end at his place in Kent.

We trust that those of our colleagues in allied branches of archaeology who are kind enough to send us copies of their books for our Library will neither take offence nor discontinue their generous gifts if we are often unable to notice these in our review columns. The influx of books for review has become so great—there is a very long list outstanding at the present moment—that we have been obliged to limit our notices to those works which deal quite specifically with Egypt. At the same time there appear occasionally books of such importance that some notice of them cannot be omitted from the *Journal*. Such is, for example, Sir Arthur Evans' second volume on the excavations at Knossos, which has just appeared in two parts. A stranger to Sir Arthur who read the book and was asked to assess the age of its author would certainly err by a quarter of a century at least, for the work shows no abatement of that combination of sound scholarly observation with well-balanced and controlled imagination which have always made its author one of the most successful of excavators and one of the most attractive of talkers and writers.

Another book which we cannot leave unnoticed is Sidney Smith's *Early History of Assyria to 1000 B.C.* Of this we need only say that it is fully worthy of the series, begun in such masterly fashion by King, of which it forms the official continuation.

Dr. Hall's Rhind Lectures for 1923 have now appeared under the title *The Civilization of Greece in the Bronze Age* (Methuen).

Mr. Campbell Thompson's *Epic of Gilgamesh* (Luzac, 1928) is naturally a book with no direct bearing on Egypt. It has, however, a value for those Egyptologists who occupy themselves with the study of comparative mythology, and it is of interest to all archaeologists as an attempt to render an ancient text into metrical English.

Professor Sayce has written for the *Proceedings of the British Academy* (Vol. XIII) an appreciation of the life and work of David George Hogarth. It is far more complete than the short notice which we printed in our last number, and is a fine tribute to a distinguished scholar and man of action.

We had intended to publish in this number an obituary notice of Arthur C. Mace, and Dr. Lythgoe, who probably knew more of Mace's career and work than any other Egyptologist, had very kindly undertaken to write this. Unfortunately Dr. Lythgoe has been far from well during the summer and it has been quite impossible for him to carry out his promise. We wish him a rapid and complete recovery.

The Editor has had of late to meet a certain amount of good-natured criticism of his policy in printing Professor Capart's Bibliography in the last double number of the *Journal* in French. This departure from the Society's custom of using only English in the *Journal* was dictated by sheer force of necessity. The translation of a long piece of technical matter of this kind is, as we know from experience, a thing which cannot be put into the hands of a professional translator, but must be undertaken by one who is himself a scholar in the subject. It is in any hands a slow business, and there is no Egyptologist who can or who ought to be expected to spare time from his own researches in order to undertake a task of this length.

At the same time it must be distinctly understood that the printing of this Bibliography in French does not indicate an intention on the part of the *Journal* to give any preference to that language over any other foreign language. Had this Bibliography been done for us, as might easily have happened, by one of our German colleagues, it would have been necessary to print it in German. In the present number is an article by Dr. Scharff which was sent to us in German, and which has been translated into English only because it was of such high general interest that it was felt that it ought to be made accessible to every reader. Perhaps it may not be out of place to state here, for the benefit of those who would rule out entirely the use of foreign languages, that the translation of Dr. Scharff's article into satisfactory English, together with the arrangement of the illustrations, cost the Editor exactly six long days. To turn into readable English a highly technical archaeological discussion in German is a very different matter from translating a few pages of a novel. *Experto crede.*

And so it comes that readers may occasionally be asked to bear with the intrusion of French or German. The occasions will be rare, and neither will in any case be used for articles of general interest: they will be limited to such things as the Bibliographies, possibly here and there a review of an abstruse publication, and, it may even be, a short article on a highly technical point of purely specialist interest.

The policy of the Society still is to avoid so far as possible the use of foreign languages. Had this policy, however, been too rigidly adhered to the Bibliography of Ancient Egypt would, when Professor Griffith found himself forced to give it up, have ceased to appear, which would have been a great misfortune both for the *Journal* and for Egyptology. In the same way we may find ourselves obliged occasionally to break our rule in favour of German, but the infringements will be kept within such limits that the general reader will not suffer.

An interesting little event which took place at the Congress of Orientalists at Oxford was the presentation by Professor Capart to Dr. Gardiner of the first copy of the French edition of Dr. Gardiner's *Egyptian Hieroglyphic Printing Type*, a work referred to in our last Notes and News. The Fondation Égyptologique Reine Elisabeth has acquired a fount of this type and has marked the occasion by producing this French edition of the catalogue.

A new Egyptian Museum is to be erected in Stockholm. To this end a Committee has been constituted, the President of which is H.R.H. the Crown Prince of Sweden. The remaining members of the Committee are the King's Custodian of Antiquities in Sweden, Dr. S. Curman, and Dr. A. Lagrelius. The collections of Egyptian antiquities already existing in Stockholm, which until now have been divided between different institutions, are to be transferred to the new Museum, for which numerous purchases have already been made last winter. The well-known Swedish art collector and donor, Dr. Otto Smith of Karlshamn, has presented to the new institution a selection from his excellent Egyptian collection.

Dr. Pehr Lugn, Keeper of the Victoria Museum of Egyptian antiquities in Upsala, has been appointed to organize and conduct the new Museum.

NOTICES OF RECENT PUBLICATIONS

The Minor Prophets in the Freer Collection and the Berlin Fragment of Genesis. By HENRY A. SANDERS and CARL SCHMIDT. (University of Michigan Studies, Humanistic Series, XXI.) New York: The Macmillan Company, 1927.

The two Biblical papyrus MSS. brought together in this publication of the University of Michigan are of quite distinct origin. The Minor Prophets MS. was bought, together with a group of Coptic MSS., for the late Mr. Charles Freer in 1916, and now forms part of the Freer Collection of the Smithsonian Institution at Washington. The Genesis MS. was acquired by Prof. Carl Schmidt in 1906, and presented by him to the Royal Library at Berlin. Its publication was delayed through various misadventures, of which the war was only one, and by a contretemps into which it is not necessary to enter the edition by its discoverer was anticipated by a collation and full description in Prof. Rahlfs' *Genesis*, which appeared at Stuttgart in 1926. It is now fully published by the collaboration of Prof. Schmidt and Prof. Sanders, with specimen facsimiles; and full facsimiles of both MSS. are published separately.

Both MSS. are of considerable bibliographical and palaeographical interest. Both belong to that early type of papyrus codex, in which the whole book consists of a single quire, composed by laying a number of sheets one on top of the other with the *recto* side of the papyrus uppermost, and then folding the whole mass in the middle. The result is a single-quire codex, in which *verso* precedes *recto* for the first half of the book, and *recto* precedes *verso* in the second half. It was a cumbersome form of book-production, which failed to realize most of the advantages of the codex form, and was soon superseded by the method, which then became universal, of quires of a moderate compass placed in juxtaposition and joined by sewing. Its use accordingly affords at least a presumption of a relatively early date.

The Prophets MS., when put together (and here a tribute is due to the skilled restorers of both MSS., which were each acquired as a mass of fragments), and when allowance is made for the leaves containing Hosea, of which only a few small pieces remain, appears to have consisted originally of 24 sheets of papyrus, forming, when doubled, 48 leaves or 96 pages. Since, however, Malachi ends on the 68th page, either 14 leaves were left blank at the end, or (as is more probable) some other book followed the Minor Prophets, of which no fragment has survived. No other explanation, however, is possible if, as stated by Sanders, every leaf up to and including the 24th has the *verso* side preceding the *recto*. A single-quire codex of 24 sheets is large, and must have been inconvenient to fold and bind, but is not unprecedented; for Schmidt quotes a Coptic gnostic codex of 36 sheets, and Sanders states that the Hermas papyrus in the Michigan Library had over 40 (perhaps 50) sheets and seems to have formed a single quire. A third-century Homer in the Morgan Library is said to have 31 sheets. The Oxyrhynchus St. John, now in the British Museum, which was the first papyrus codex of this type to be discovered, must originally have had 25 sheets.

The Genesis MS. is of more moderate size, consisting of only 16 sheets (32 leaves). Here, however, a new phenomenon appears; for the codex ends at Gen. xxxv. 8, in the middle of a verse, the title *γενεσις κοσμου* being appended at the foot of the last page. This suggests that a second codex must have followed, containing the remainder of the book, amounting to about one-third of the whole, and requiring therefore only about eight sheets. This is no doubt possible, or the second codex may have proceeded to include part of Exodus; but since single-quire codices of 24 sheets were not unknown, it may seem strange that the whole of Genesis was not included in a single book. A possible, and indeed a probable, explanation may be offered. The length of text, Gen. 1.-xxxv. 8, is approximately the same as that of one of the longer Gospels, Matthew or Luke, and this, as is generally recognized, is about the extreme amount that could be included in a single papyrus roll. It therefore seems probable that the scribe of our codex stopped where he did because he had reached the end of the roll from which he was copying, and began a new codex to take the contents of a new roll. The irregularity of the script, which the editor rightly explains as due to the scribe's efforts to make his papyrus fit a prescribed quantity of text, seems to confirm this theory.

Both MSS. are assigned by the editor to the latter part of the third century. For the Minor Prophets MS. this may stand, though a date a little on either side of A.D. 300 would seem possible; but the Genesis

MS. seems definitely referable to the 4th century. The Abinnaeus papyri (c. 340-350) provide several hands of this type. Both MSS. are written in cursive, non-literary hands, the Minor Prophets being both better written and more correct than the Genesis. The scribe of the latter, in particular, was clearly an ignorant and untrained writer, and the irregularities of the script (sometimes with two columns to the page, sometimes with one, and with much variety in the number and length of lines) relegate the MS. to a humble rank as a piece of book production. They also weaken its authority in cases of doubtful readings though they absolve it from any suspicion of deliberate editing.

Textually the Minor Prophets MS. shows several cases of accommodation to the Hebrew (the editor reckons 33 instances), but none that are otherwise known as Hexaplaric. There are four or five agreements, with Symmachus, one with Aquila, none with Theodotion. Among the uncials this MS. (W) shows most affinity with Q (the Marchalianus, which is of Egyptian origin), and next with B; but it frequently differs from both, and the MSS. with which it shows most frequent agreement are those numbered 407 and 410 in Rahlfs' list. Of the versions the Coptic, as one would expect, is decidedly the nearest to it, and among the Coptic versions (so far as the very fragmentary nature of the evidence permits a conclusion) the Akhmimic and Sahidic. The readings require fuller examination and analysis; but the substantial fact remains that we have in W a pre-Origenian Egyptian text of the greater part of the Minor Prophets. When Brooke and McLean reach this part of their great work, the Washington MS. must play an important part in their apparatus.

The Genesis MS. comes too late for the Cambridge Septuagint, but it has been utilized in advance, as explained above, by Rahlfs. This, again, is definitely not Hexaplaric, though there are a few independent accommodations to the Hebrew. The only early uncial that contains any considerable portion of Genesis is A, and this comes very low in the list of agreements with the Berlin papyrus. Its most marked affinity, according to the editors, is with the cursives 29, 108, 344, which are classed by Swete as Lucianic; while of the versions the Armenian heads the list, followed by the Bohairic, Ethiopic and Sahidic. So far as can be gathered from a first inspection the papyrus does not throw much light on the textual problems of the Pentateuch; but its age makes it a welcome addition to our authorities, in spite of the many errors which obscure its evidence, making it of little value, in particular, in respect of omissions.

F. G. KENYON.

Philadelphëia. By PAUL VIREECK. (No. 16 of the series called *Morgenland*, edited by W. SCHUBART.) Leipzig: Verlag J. C. Hinrichs, 1928. Pp. 70, with 10 plates and 4 figures in text.

This study of the foundation of a Hellenistic town in the Fayyûm is divided into two parts. The first contains a description of the ruins of Philadelphia and of the objects found by the author and his colleague Professor Zucker in the excavations which they made there nearly twenty years ago. Very interesting is the plan on Pl. i, which shows how the town was originally laid out by Apollonios' architect in parallel rows of streets crossing each other at right angles. Though much of the site has been demolished since the German excavations, the main lines of the streets are clearly distinguishable in a photograph taken from the air in 1925. It seems surprising that of the many temples mentioned in the papyri not more than two have been located. A sketch in a Michigan papyrus shows the house of Artemidoros the physician on the bank of the canal alongside the temples of Hermes and Premarres, and as other temples are known to have been situated *παρὰ τὴν δώρυγα*, it is probable that this part of the site, now much destroyed, contained a long row of the more important buildings, private as well as public. The second part of the book describes the foundation of Philadelphia, the development of Apollonios' estate and the work carried on by Zenon. In fact, it is a summary of the contents of the Zenon papyri, clearly written and enlivened by an abundance of well-chosen quotations and references. One may not agree with the author's views on every detail; I doubt for instance if he is right in calling Kriton an admiral of the king's fleet; his explanation of *ἐγκανρής* as a baker of pottery is disproved by the papyri, in which it clearly means an encaustic painter; and his statement that Zenon was the general farmer of the wine taxes in three nomes, though supported by the authority of Rostovtzeff, does not seem to me to be based on sound evidence. But mistakes in detail are inevitable in dealing with such a mass of new and undigested material, and in its main lines the book is quite reliable and up to date. Viereck has given a good general picture of the early days of Philadelphia, making use of all the published matter and adding a very welcome account of his own work on the site.

C. C. EDGAR.

The Literature of the Ancient Egyptians. Poems, narratives, and manuals of instruction, from the third and second millennia B.C. By ADOLF ERMAN. Translated into English by AYLWARD M. BLACKMAN. London: Methuen & Co., Ltd.

The original German edition of this book was reviewed in the *Journal* (x, 193 ff.) at considerable length by its present translator. As Dr. Blackman was not allowed to alter the sense of Professor Erman's renderings, the bulk of his comments on the latter's book holds good for his own. At times he is in the unenviable position of having to give a translation in 1927 which he has already condemned in 1924. In such cases he indicates the sources of correction by footnotes. Dr. Blackman intended to make independent translations of all the texts offered in this volume: it was not to be expected that Professor Erman would be willing to see these translations published as the English version of his own; but it is disappointing in the circumstances that it was not possible for Dr. Blackman to make an independent selection of Egyptian texts as well and thus produce a completely new book. English readers unaccustomed to German would then have lost Professor Erman's introduction—perhaps with the exception of Dr. Blackman's additional references throughout the book the most valuable part of the English edition—but they would have gained improved and, which is more important, fuller translations of the Egyptian literature.

In short the book can hardly be considered seriously as a new publication of translations for the specialist, since he is better off with the German edition and Dr. Blackman's review. But although its justification as a presentation of Egyptian literature for the layman is challenged by the existence of Sir Ernest Budge's *The Literature of the Ancient Egyptians*—for the two books cover a large amount of ground in common, and where that is so Erman-Blackman is to be preferred only if it offers a more correct translation; and since it stands self-confessed as a second-best attempt, the layman is likely on principle to prefer Budge—yet there remains a considerable divergence in the choice of texts, and to some the literary bias of Erman-Blackman will be more acceptable than the autobiographical and magical excerpts and the generally wider range of Budge.

S. R. K. GLANVILLE.

Arabia before Muhammad. By DE LACY O'LEARY, D.D. (Trübner's Oriental Series.) London, 1927. Price 10s. 6d. net.

In this work Dr. O'Leary covers a wider field than the title will probably suggest to most people. He does not confine himself to the condition of Arabia immediately before the appearance of Muhammad; but seeks to summarize what is known of Arabia from the earliest times down to Muhammad's day. Thus he devotes a chapter to the Egyptian penetration of Arabia, founded upon what is known from ancient monuments of Egyptian sea-trade and commerce in the Red Sea. Another chapter deals with the Mesopotamian penetration of Arabia, summarizing the evidence of the cuneiform inscriptions. Considerable attention is also devoted to the notices of Arabia in classical writers. Naturally the native evidence of the South Arabian inscriptions is not neglected, though not so thoroughly treated as it might have been, while the spread of Judaism and Christianity in Arabia and the influence of Rome and Persia in later times are passed in review.

The main thesis of the book is that Arabia has never been the isolated country it is often supposed to have been, but in pre-Islamic times was always open to the influences of civilization. It lay across the main stream of communication between East and West, and world-trade passed round it and across it. In varying measure from age to age Arabs took part in the carrying trade, while the fact that it was the key to the East made it the arena of diplomatic intrigue, especially in the days of the rivalry between Rome and Persia. It is round this theme of Arabian trade that Dr. O'Leary has collected a great deal of material from very varied sources. He has certainly shown that from time immemorial world-trade has eddied round the confines of Arabia, and that the Arabs could not at any time be regarded as primitive savages. On the other hand he perhaps tends to exaggerate the extent to which outside civilization penetrated the peninsula. To say, for instance, that "Arabia was the area in which the world-powers were pitted against each other" (p. 148) or that "the religion of Islam was evolved...in the midst of the general tide of West Asiatic civilization," while in a modified sense true, is apt to give an erroneous impression. Unfortunately the book contains a good many loose statements, rather shakily founded speculations, and a number of disconcerting misprints which more careful proof-reading might have removed.

RICHARD BELL.

Coptica consilio et impensis instituti Rask-Oerstediani edita. IV. Die Achmimische Version der zwölf kleinen Propheten (codex Rainerianus, Wien) herausgegeben von Walter Till, Havniae, 1927. Pp. xxxii and 151.

The Akhmimic dialect of Coptic, first discovered only in the eighties of last century, is now represented by a considerable body of texts. During the last three years Dr. Till, a pupil of Professor Junker, has contributed a number of valuable studies in Akhmimic to the *Zeitschriften* of Berlin and Vienna, and has just published a remarkable work, a grammar of the dialect, which is of great importance for all students of Coptic. The longest known text in Akhmimic is that of the Twelve Minor Prophets on a parchment MS. originally of 366 pages, out of which only thirty are missing altogether; seventy are in Cairo, and all the others are in the Rainer collection at Vienna and are here edited by Till. They were first published by the papyrologist Wessely in 1915 with useful facsimiles and reprints of parallel texts in Bohairic and Sahidic, but the faded and injured state of the MS. demands close study and very exact knowledge of the language. Till's restorations are in scholarly Akhmimic, and he has deciphered a great deal that was left unread or was misread in the earlier edition, even recovering some lost pieces from the printings-off of the ink on pages opposite. The text is given by Till without translation; the words, Coptic and foreign, are listed in separate indices. It is unfortunate that the Cairo fragments could not be collated and added to his excellent edition. In the succinct Introduction the value of this very ancient MS. for questions relating to the Septuagint is indicated, and it is ingeniously shown that the text was copied from another Akhmimic MS. but was translated from a Sahidic version.

Perhaps the reviewer may be allowed a digression. The principal argument for the attribution of the Akhmimic dialect to Akhmîm has been drawn from some local graffiti. But it may be remarked that there is another piece of evidence which taken with the first seems almost decisive. A characteristic feature of Akhmimic is the 𐪓 *kh* representing ancient *h* where the other dialects of Coptic have 𐪔 *sh*. This phenomenon is fortunately illustrated in the very name of *Hm-Min*, in Sah. and Boh. 𐪔𐪎𐪓𐪎. Here the sound of "Akhmimic" 𐪓 is preserved in the Arabic *أخميم* Akhmîm, whereas at no great distance northward *Hmn-nw* is in Arabic *أشمونين* Ashmûnên, the *sh* agreeing with the Sah. and Boh. form 𐪔𐪎𐪓𐪎; compare also Ashmûn, a frequent name in the Delta. We may thus surmise that the "Akhmimic" dialect prevailed at Akhmîm down to the seventh century. In the late pagan period it must have had a vogue amongst the scribes, its characteristics appearing wide-spread in the Greek pronunciation of proper names and in demotic writing; but (apart from "sub-Akhemimic") the dialect does not vary greatly in different texts, and one may conclude that in Christian times it was confined to a small area. Perhaps both of these circumstances, its geographical limitations and its pagan connexions, led Shenûte to neglect Akhmimic and to exert his vast influence in promoting the use of Sahidic.

F. LL. GRIFFITH.

I papiri ieratici del Museo di Torino. Il Giornale della Necropoli di Tebe, vol. I, a cura di GIUSEPPE BOTTI e T. ERIC PEET (fascicoli 2, 3). Torino: Fratelli Bocca editori, 1928. (Obtainable from the University Press of Liverpool, Ltd., Hodder and Stoughton, London, and Geuthner, Paris.)

The first fasciculus of this important publication was reviewed in the last number of the *Journal*; two more fasciculi having appeared in rapid succession, the work is now complete and consists of sixty-three large photographic plates with autograph transcript into hieroglyphic opposite to each, sixty-seven pages of description, translation and indices, and three key plates to show the disposition of the fragments in the three papyri which represent the journal of the necropolis. The journal of year 13-14 of Neferkerêc Ramesses IX, and part of that of year 17 were in the first instalment; year 17 is now completed together with various memoranda on the back of it, and the journal of year 3 of Khepermarêc Ramesses X, known as the Chabas-Lieblein papyrus from its first editors, is republished with notable supplements. The historical data, difficult to interpret, have been discussed by Professor Peet in his articles *The Supposed Revolution of the High-priest Amenhotpe under Ramesses IX* in *Journal*, xii, and *Chronological Problems of the Twentieth Dynasty* in *Journal*, xiv. Most of the hieratic is of a fairly easy type to read, but there are examples of a cursive hardly less formidable than that of the Mayer Papyri, and we must congratulate the editors on their success in dealing with them. The elaborate index to the proper names is of special value since they abound in the Theban documents and afford valuable clues, the same names occurring again and again; we should have been grateful too for an index of words, but this particular boon has not been vouchsafed.

It is to be hoped that the effort to explore and make known the Turin collection of papyri will not end here. The unique marriage document of the Twentieth Dynasty, published by Černý and Peet in *Journal*, XIII, is another example of the treasures that may be found. May it be suggested that a reduction of scale in plates would not materially affect their value, but would increase their handiness and greatly diminish their cost?

F. LL. GRIFFITH.

L'Administration civile de l'Égypte byzantine. Par GERMAINE ROUILLARD. Préface de CHARLES DIEHL. 2^e édition. Paris: Paul Geuthner, 1928. Pp. xv + 268. 100 fr.

This new edition of Mlle Rouillard's valuable work (*Journal*, x, 212-4) deserves a hearty welcome. Much important material has been published since the earlier edition appeared, and this is now incorporated, along with various minor alterations introduced in consequence of criticisms passed on the first edition. Well printed, with good plates illustrating Coptic and other antiquities, the volume should form part of the library of every student of Byzantine Egypt. It must be added that the alterations and additions affect points of detail, not the general scheme of the work.

H. I. BELL.

LIST OF PLATES

	PAGE
THE STATUES OF SENNEMUT AND MENKHEPERRĒSENĀ IN THE BRITISH MUSEUM.	
Plate I.	Statuette in Red Quartzite of Sennemut. British Museum, No. 1513 . <i>Frontispiece</i>
Plate II.	Statuette in Dark Grey Granite of Sennemut and the young Princess NeferurĒ. British Museum, No. 174 2
Plate III.	Statuette in Dark Granite of MenkheperrĒsenb. British Museum, No. 708 2
AKHENATEN'S ELDEST SON-IN-LAW ANKHEPERRĒ. (<i>See also</i> Pls. V, VI.)	
Plate IV.	1. Stele of Akhenaten and SemenkhkerĒ. Berlin, No. 17,813 7
A HEART SCARAB OF THE MNEVIS BULL.	
Plate IV.	2. Heart Scarab of a Mnevis Bull. Toledo Museum of Art 7
THE GRAFFITO FROM THE TOMB OF PERE.	
Plate V.	Hieratic Graffito from the Tomb of Pere at Thebes, ll. 1-18 10
Plate VI.	Hieratic Graffito from the Tomb of Pere at Thebes, ll. 19-33 11
AN IVORY SPHINX FROM ABYDOS.	
Plate VII.	Ivory Sphinx of Hyksos Date from Abydos. British Museum, No. 54,678 46
OBJECTS OF TUTANKHAMŪN IN THE BRITISH MUSEUM.	
Plate VIII.	Copper Bowl bearing the Name of TutankhamŪn. British Museum, No. 43,040 74
Plate IX.	1, 2. Fayence Kohl-tubes of TutankhamŪn. 3. Reed Kohl-tube of Eighteenth Dynasty Date. 4. Fragment of Fayence Throw-stick of TutankhamŪn. All in the British Museum 74
Plate X.	Statuette in Hard Gritstone of TutankhamŪn, usurped by Haremhab. British Museum, No. 37,639 75
Plate XI.	Statuette in Steatite of Amenophis III. British Museum, No. 2275 76
THE SONS OF TUTHMOSIS IV.	
Plate XII.	Scene from the Vestibule of Tomb No. 64 at Thebes. Prince Tuthmosis-Khaḥkaḥu on the Knee of his Tutor Hekreshu 84, 85
SOME POTSDHERDS FROM KASSALA.	
Plate XIII.	Potsherd from Kassala in the Sudan 113
NOTE ON THE SCULPTURED SLAB NO. 15,000 IN THE BERLIN MUSEUM.	
Plate XIV.	Sculptured Slab No. 15,000 in the Berlin Museum 117
NOTE ON AN ANCIENT EGYPTIAN FIGURE.	
Plate XV.	Pottery Figure of a Crouching Man in a Jar, in the possession of Mr. L. J. Rabbette of Boston, Mass. 126
A PAINTED TERRACOTTA HEAD IN THE BRITISH MUSEUM.	
Plate XVI.	Eighteenth (?) Dynasty Terracotta Bust. British Museum 209
Plate XVII.	Eighteenth (?) Dynasty Terracotta Bust. British Museum 210

	PAGE
THE FIG AND THE CULT-ANIMAL OF SET.	
Plate XVIII.	1. The Sha-animal. From the Mace-head of the Scorpion King. 2. Model of a young Pig showing the Stripes. 3. Fayence Model of a Sow with Young. B.M. 11,976. 4. Glazed Figure of a Sow. First Dynasty 211
Plate XIX.	Representations of Figs. 1. Tomb of Inena (No. 81) at Thebes. 2. Tomb of Nebamon (No. 24) at Thebes 219
THE CEMETERIES OF ABYDOS: WORK OF THE SEASON 1925-26.	
Plate XX.	Stelae from Abydos. 1. No. 6. 2. No. 24. 3. No. 23 237
Plate XXI.	Stelae from Abydos. 1. No. 25. 2. No. 14. 3. No. 19 238
Plate XXII.	Statuette and Stelae from Abydos. 1. No. 13. 2. No. 12. 3. Statuette of Mentuhotpe. 4. No. 4 239
Plate XXIII.	Stelae from Abydos. 1. No. 7. 2. No. 2. 3. No. 13 243
SOME PREHISTORIC VASES IN THE BRITISH MUSEUM AND REMARKS ON EGYPTIAN PREHISTORY.	
Plate XXIV.	Predynastic White-on-red Ware. 1. B.M. 58,199. 2. B.M. 53,882. 3. B.M. 58,200. 4. B.M. 58,192 261
Plate XXV.	Predynastic Pottery. 1. B.M. 57,523. 2. B.M. 58,197. 3. B.M. 58,207. 4. B.M. 53,885. 5. B.M. 57,933 262
Plate XXVI.	1, 2. Predynastic White-on-red Vase. British Museum, 53,881 263
Plate XXVII.	Egyptian and European Pottery. 1. The Hague, Carnegie Loan Museum, T 774. 2. Berlin Eg. Mus. No. 22,388. 3a. Berlin, Museum für Völkerkunde; Culture of the Lake-dwellings, Western Europe. 3b. University College, London (<i>Corpus</i> XXVII 58). 4. Formerly Coll. Golenishchev N 2947. 5. British Museum 49,025 267
Plate XXVIII.	Predynastic White-on-red Vase. Brussels, Musées Royaux du Cinquantaire, E. 3002 268

	PAGE
A RAMESSIDE ROYAL STATUE FROM PALESTINE.	
Plate XXIX. 1. Alabaster Statue from Palestine or Syria	280
A ROYAL STELE OF THE NEW EMPIRE FROM GALILEE.	
Plate XXIX. 2. Fragment of a Stela from Tell el-'Oreimeh	280
THE LETTERS OF AAHMÖSE OF PENIATI.	
Plate XXX. 1. Shabti-figure of Aahmōse. British Museum, 24,427.	
2, 3. Front and Back Views respectively of a Wooden Kohl-pot belonging to Aahmōse. British Museum 5337	296
Plate XXXI. Pap. British Museum 10,102, <i>Recto</i>	298
Plate XXXII. 1. Pap. British Museum 10,103. Address on <i>Verso</i> .	
2. Pap. British Museum 10,102, <i>Verso</i>	298
Plate XXXIII. 1. Pap. British Museum 10,107, <i>Recto</i> .	
2. Pap. British Museum 10,103, <i>Recto</i>	303
Plate XXXIV. Pap. British Museum 10,104, <i>Recto</i> (fig. 1) and <i>Verso</i> (fig. 2).	307
Plate XXXV. Pap. British Museum 10,102, 10,103, 10,104, 10,107	312
A LATIN PETITION OF ABINNAEUS (Papyrus B.M. 447).	
Plate XXXVI. Pap. London (British Museum) 447. Photograph	320
Plate XXXVII. Pap. British Museum 447. Transcript	322

LIST OF ILLUSTRATIONS IN THE TEXT

	PAGE
AKHENATEN'S ELDEST SON-IN-LAW (ANKHKHEPRURĒ).	
Copies of cartouches in Meryrĕ's tomb	6
Finger-ring bezels	6
Akhenaten and his co-regent Semenkherĕ	8
Sculptured stone showing cartouches	8
OBJECTS OF TUTANKHAMŪN IN THE BRITISH MUSEUM.	
Inscription on copper bowl	74
Inscription on white fayence kohl-tube	74
Inscription on deep blue fayence kohl-tube	74
Inscription on kohl-tube of reed	74
Inscription on blue fayence funerary throwstick	75
Inscription on king's sceptre or staff	75
Inscription on plinth of portrait-statue	75
Inscription on plinth of figure of Amenophis III	76
Inscription on plinth of figure of Amenophis III	76
Cartouches on British Museum stele No. 57,399	77
THE SONS OF TUTHMOSIS IV.	
Tracing of fragment of tomb-inscription	82
Drawing of inscribed pectoral	84
Graffiti of the reign of Tuthmosis IV at Konosso	85
MISCELLANEA.	
Scarab-shaped seals of a Mayor of Byblos	109
Ivory label of the First Dynasty	110
Gold button-seals	110
Lapis lazuli seal	111
THE PIG AND THE CULT-ANIMAL OF SET.	
Figures of the pig in the temple of Edfu	214
Drawing of a hippopotamus	214
The cult-animal of Set	218
The cult-animal of Set, from a M.K. monument at Lisht	218
The <i>sha</i> -animal in the tomb of Sekerkhabau	218
Sealings of Perabsen	221
Sealings of Khasekhemui	221
Sealing of Neterkhet Zoser	221
The god Ash, from the mortuary temple of Sahurĕ	221
The fennec	223
The jerboa	223
The okapi	223
The aard vark	224
The ass	224
Journ. of Egypt. Arch. XIV.	43

	PAGE
THE CEMETERIES OF ABYDOS : WORK OF THE SEASON 1925-26.	
Inscriptions on stelae from Abydos	238, 240
Inscriptions on doorjambs from tombs of the Nineteenth and later Dynasties	244, 245
SOME PREHISTORIC VASES IN THE BRITISH MUSEUM AND REMARKS ON EGYPTIAN PREHISTORY.	
Designs of hippopotami on vase B.M. 53,882	262
Designs of ships on red-on-buff pot	263
Designs of ships on white-on-red pot	264
Design on white-on-red pot at University College, London	267
Animal designs on pot from Maḥasnah	268
Vase from the Carnegie Loan Museum at The Hague	269
Vase of the West European culture circle	270
"Libyan" arrow-heads	271
Vase of truncated conical form at Marsa Maṭrūḥ	271
SUEZ AND CLYSMA.	
Sketch of the Clysma road	278
A ROYAL STELE OF THE NEW EMPIRE FROM GALILEE.	
Basalt stele from Tell el-'Oreimeh	281
THE LETTERS OF AAḤMŌSE OF PENIATI.	
Papyrus B.M. 10,104, <i>verso</i>	311

NOTICES OF RECENT PUBLICATIONS

	Reviewed by	PAGE
Greek Papyri in the Library of Cornell University. W. L. Westermann and C. J. Kraemer, Jr.	Arthur S. Hunt	185
Les Papyrus Bouriant. Paul Collart	Arthur S. Hunt	186
Der heutige Stand der römischen Rechtswissenschaft. Leopold Wenger	F. de Zulueta	186-187
The Tomb of Huy, Viceroy of Nubia in the Reign of Tutankhamün. Nina de Garis Davies and Alan H. Gardiner	T. Eric Peet	187-188
Ancient Egyptian Materials. A. Lucas	S. R. K. Glanville	188-190
Ancient Egyptian Metallurgy. H. Garland and C. O. Bannister	S. R. K. Glanville	190-191
Kings and Queens of Ancient Egypt. Portraits by Winnifred Brunton. History by eminent Egyptologists	H. Frankfort	192
The Credibility of Herodotus' Account of Egypt. Wilhelm Spiegelberg. Translated from the German by A. M. Blackman	R. O. Faulkner	192-193
Études d'égyptologie: Bases, méthodes et résultats de la chronologie égyptienne. Raymond Weill	R. O. Faulkner	193-194
The Oxford Excavations in Nubia. F. Ll. Griffith	Warren R. Dawson	194-196
A History of the Ancient World. Vol. I. The Orient and Greece. M. Rostovtzeff. Translated from the Russian by J. D. Duff	Sidney Smith	196
The Psalmists. Hugo Gressmann, H. W. Robinson, T. H. Robinson, G. R. Driver, and A. M. Blackman	T. Eric Peet	197
The Fellâhîm of Upper Egypt. Winifred S. Blackman	T. Eric Peet	197-198
A History of Egypt under the Ptolemaic Dynasty. Edwyn Bevan	C. C. Edgar	198-199
Vie de Petosiris, grand-prêtre de Thot. Émile Suys	H. R. Hall	199-200
L'Art égyptien. Charles Boreux	H. R. Hall	200-201
Die Kunst der Ägypter. Georg Steindorff	H. R. Hall	201-202
Animals of Ancient Egypt. David Paton	W. B. Emery	202
Thebes. The Glory of a Great Past. Jean Capart and Marcelle Werbrouck	W. B. Emery	202
Relazione sui lavori della Missione Archeologica Italiana in Egitto (Anni 1903-1920). E. Schiaparelli	H. R. Hall	203-205
Kinderspielzeug aus alter Zeit. Karl Gröber	H. R. Hall	206
I papiri ieratici del Museo di Torino. Il Giornale della Necropoli di Tebe. Vol. I. Giuseppe Botti and T. Eric Peet	F. Ll. Griffith	206-207, 332-333
The Minor Prophets in the Freer Collection and the Berlin Fragment of Genesis. Henry A. Sanders and Carl Schmidt	F. G. Kenyon	329-330
Philadelphæa. Paul Viereck	C. C. Edgar	330
The Literature of the Ancient Egyptians. Poems, narratives, and manuals of instruction, from the third and second millennia B.C. Adolf Erman. Translated into English by Aylward M. Blackman	S. R. K. Glanville	331
Arabia before Muhammad. De Lacy O'Leary	Richard Bell	331
Coptica consilio et impensis instituti Rask-Oerstediani edita. IV. Die Achmimische Version der zwölf kleinen Propheten. Walter Till	F. Ll. Griffith	332
L'Administration civile de l'Égypte byzantine. Germaine Rouillard	H. I. Bell	333

INDEX

A

- Aahmes, stela of time of, 242.
 Aahmōse of Peniati, The Letters of, S. R. K. GLANVILLE, 294-312.
 ʿAakheprurēʿ, 10.
 Abinnaeus, 320.
 Abui...?, 304.
 Abusir el-Meleḳ, 264, 266, 272.
 Abydos, The Cemeteries of: Work of the Season 1925-26, H. FRANKFORT, 235-245.
 Abydos. 180, 181, 211, 264.
 ivory sphinx from, 46.
 models of pig in predynastic graves at, 211.
 stela of Hori at, 65.
 survey of, 325.
 temple of Seti I at, 30.
 Acheulian implements, 265.
 Achilles, Aurelius, 119.
 Achoapis, 292.
 Adad-nirāri I, 285.
 Adonis, 215.
 Adulis, 114.
 Aelian, 29, 32, 213.
 Aemilian, 16, 17, 18, 21.
 Egyptian coins of, 19.
 Africa, tin ore in, 99.
 African elephant, 267.
 Africanus, 52.
 Agatharcides, 253.
 Agathis, 293.
 Agathodamon canal, 252.
 Agenor, 289, 290, 293.
 Agricultural Ledger in P. Bad. 95, An, M. SCHNEBEL, 34-45.
 Ai, *see* Iye.
 Ailah, 278.
 Aischylos, 291, 293.
 Akhenaten, 82, 222, 325.
 and Semenkharēʿ, stela of, 7.
 Akhenaten's Eldest Son-in-law, ʿAnkhhkeprurēʿ, PERCY E. NEWBERRY, 3-9.
 ʿAkheper(ka?)rēʿ, 85.
 ʿAkheper(u)rēʿ, 82, 83, 85.
 Akhetaten, 301.
 ALBRIGHT, W. F. and ALAN ROWE, A Royal Stele of the New Empire from Galilee, 281-7.
 Alcaeus, 79.
 Aleppo, 284, 285.
 tin ore from, 100.
 Alexander, 14, 226.
 worship of, 248.
 Alexander Severus, lease of reign of, 118.
 Alexandria, 129, 227.
 Black Sea, commercial relations with, 14.
 provisioning of, 38.
 temple of Sarapis at, 229.
 under Ptolemy II, 252.
 Alexandrian coins of Valerian and Gallienus, 16, 18.
 objects in South Russia, 14.
 Al-Kindī, 277.
 Al-Ḳulzum = Clysmā, 277.
 Allen, T. George, 1.
 Al-Muḳaddasi, 277.
 Alypius, 225.
 Amenemḥab, 243, 284.
 Amenemḥet, 84, 85, 221.
 Amenemmes I, *whm mswt*, 67.
 Amenemopenakht, 51.
 Amenherkhepeshef, 58.
 Amenhotep, 66, 68, 70, 72, 243.
 high priest of Amūn, 67.
 royal scribe, 211.
 son of Kenna, 49.
 Amenkhau, 64, 66, 70.
 popular name in Twentieth Dynasty, 69.
 Kedakhtef son of, 49.
 Amenmessu, 243.
 Amenmōse, 86, 298, 299
 Amennakht, 60.
 Amenophis I, 295.
 Amenophis III, 3, 83, 84, 85.
 lion of, 76.
 palace of, 299.
 portrait of, with Mutemwia, 82.
 property given to temple of Ptah at Memphis by, 211.
 reliefs of, at Karnak, 72.
 steatite figure of, 76.
 terracotta head of period of, 209.
 tomb of time of, 3.
 Amenophis IV, 4, 117.
 Ramose, vizier of, 3.
 Ameny, 239.
 Ammonarion, Aurelia, 118, 120.
 Amonisru, 76.
Ancient Egyptian Materials, A. LUCAS (reviewed), 188.
Ancient Egyptian Metallurgy, H. GARLAND and C. O. BANNISTER (reviewed), 188.
 Aniba, 115.
 Aninakht, 70.
 ʿAnkhesenamūn, 74.
 ʿAnkhhkeprurēʿ, 5, 6, 10, 11.
 ʿAnkhhkeprurēʿ, Akhenaten's Eldest Son-in-Law, PERCY E. NEWBERRY, 3-9.
 ʿAnkhsenpaten, 117.
 Anthippos, 292, 293.
 Antigonos Gonatas, 13, 15.
 Antinous, 7.
 Antioch, 234.
 Antiochus I, 250.
 Apa, 109.
 Aphrodite, 215.
 Aphthonetos, 289, 290, 291, 293.
 Apion, 35.

- Apollonia, 289, 291.
 Apollonios, 13, 15, 253, 254, 288, 289, 291, 292.
 Arab invasion of Egypt, 233.
 Arabia, 129.
 Arabs, Ptolemy II and relations with, 251.
 Archestratus, 23.
 Archimedes, 253.
 Argos, *θεοποιί* of, 13.
 Aristarchus of Samos, 253.
 Aristeas, 291.
 Aristeas letter, 246, 260.
 Aristides, 213.
 Aristomachos, 289, 290, 292.
 Ariston, 251.
 Aristotle, 22, 27, 28, 29, 31, 32.
 Armenia, bronze in, 108.
 tin ore in, 99.
 Arrapha, 283, 284.
 Arsinoë (Suez), 251.
 Arsinoë II, 248, 250, 253.
 cult of, 256.
 Artatama, 283, 284.
 Artemidorus, 123.
 Arthur, King, 233.
 Ashatikht, 51.
 Ashmolean Museum, 128.
 Assur, 283.
 relations with Egyptian finds, 275.
 Astrabad, tin ore from, 100.
 Ašwān, 264.
 Roman frontier at, 115.
 Asyūt, *see also* Lycopolis, 74, 128, 130.
 Atef-senb, 4.
 Athanasius, St., lecture on, 180.
 Athenaeus, 22, 25, 27, 30, 31, 32.
 Athenian use of mandrake as amulet, 117.
 Athens and Bosphorus, relations between, 14.
 Atonou-nofir-nofru-mer-Atonou, 4.
 Attalos, 289.
 Augustus, favour to Jews at Alexandria, 230.
 Aurelian, 21.
 subjection of Egypt under, 231.
 Ausonius, 29.
 Authy, vizier of Nineteenth Dynasty, 110.
 Axum, German Expedition to, 114, 115.
 period, Graeco-Roman pottery of, 114.
 Axumites, raids of, 115.
 Azerbeidjan, tin from, 100.
- B**
- Babylon, pigs unknown to Sumerians of, 215.
 Babylonia, pear-shaped type of club in, 273.
 Badāri, 266, 270.
 Bahr el-Ghazāl, blacklead sheen on pottery at, 114.
 BANNISTER, C. O. and H. GARLAND, *Ancient Egyptian Metallurgy* (reviewed), 188.
 Barkal, Gebel, 76.
 Burton, Harry, 3.
 Bastet, 110.
 Bathay, 10, 11.
 BAYNES, NORMAN H., 180.
 with MILNE, J. G., Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7):
 4. Political History, Biography, Administration, Topography, Chronology, 144-7.
 5. Social Life, Education, Art, Economic History, Numismatics and Metrology, 147-9.
 Bebi, tomb of, at El-Kāb, 213.
 vizier of Eleventh Dynasty, 109.
 Behnesa, 26.
 Bekenptah, 243.
 Bekentha, 50.
 BELL, H. I., 78, 183.
 Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7):
 3. Publications of Non-Literary Texts, 140-4.
 9. General Works, Bibliography, Miscellaneous Notes on Papyrus Texts, 157.
 10. Miscellaneous and Personal, 157-8.
 lecture by, 180.
 review by, 333.
 BELL, RICHARD, review by, 331.
 Beni-Ḥasan, 225.
 Benya, 298.
 Beth-shan, 285, 286, 287.
 BEVAN, EDWYN, *History of Egypt under the Ptolemaic Dynasty* (reviewed), 198.
 Bibliography (1926): Ancient Egypt, JEAN CAPART, 159-179.
 Preservation of monuments, 159.
 Excavations, 159-161.
 Publication of texts, 161-162.
 History, 162-164.
 Geography, 164-165.
 Foreign relations, 165-167.
 Palaeography, 167-168.
 Religion, 168-170.
 Science, 170-171.
 Literature, 171-172.
 Archaeology, 172-178.
 Biography, 178.
 Miscellaneous, 178-179.
 Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7), 131-158:
 1. Literary Texts, 131-4.
 2. Religion, Magic, Astrology, 134-140.
 3. Publications of Non-Literary Texts, 140-4.
 4. Political History, Biography, Administration, Topography, Chronology, 144-7.
 5. Social Life, Education, Art, Economic History, Numismatics and Metrology, 147-9.
 6. Law, 149-155.
 7. Palaeography and Diplomatic, 156.
 8. Lexicography and Grammar, 156.
 9. General Works, Bibliography, Miscellaneous Notes on Papyrus Texts, 157.
 10. Miscellaneous and Personal, 157-8.
 Bilgai stela, 93.
 Birkat et-Timsāh, 277.
 Black Sea, Greek cities of, 13.
 relations with Egypt, 14.
 BLACKMAN, A. M., with HUGO GRESSMANN, H. W. ROBINSON, T. H. ROBINSON and G. R. DRIVER, *The Psalmists* (reviewed), 197.
 BLACKMAN, W. S., *The Fellāḫin of Upper Egypt* (reviewed), 197.
 Blemmyes, raids of, 115.
 Bohemia, tin ore in, 99.
 BOLLING, G. M., The New Ptolemaic Papyrus containing Parts of *Iliad*, XII, 128-263, 78-81.
 BOREUX, CHARLES, *L'Art égyptien* (reviewed), 200.
 Bosphorus, Paerisades king of, 13.
 relations with Greece and Egypt, 14.

- BOTTI, GIUSEPPE, Who succeeded Ramesses IX-Nefkereré?, 48-51.
with PEET, T. E., *I papiri ieratici del Museo di Torino* (reviewed), 206, 332.
- Breasted, Dr. J. H., 1.
- Britain, silver mines of, 313.
tin ore from, 103.
- BRUNTON, W., *Kings and Queens of Ancient Egypt* (reviewed), 192.
- Byblos, A Middle Kingdom Mayor of, P. E. NEWBERRY, 109.
prince of, and envoys from Egypt, 64.
relations with Egyptian finds, 275.
relief from, 286.
stele from, 287.
- Byzantine influence in Sudan, 115.
- C**
- Caesar, Julius, tin mentioned by, 98, 103.
- Cairo, ostraca of Twentieth Dynasty at, 69.
- Callimachus, 246, 252, 253.
- Calverley, Miss, 180, 325.
- Calycadnus, 129.
- Canaanite temples, cult-stands from, 285.
- Canopus, decree of, 228.
- CAPART, JEAN, 183.
Bibliography (1926), *Ancient Egypt*, 159-179.
with WEBBROUCK, M., *Thebes, The Glory of a Great Past* (reviewed), 202.
- Capsian implements, 265.
- Caracalla, edict of, 119.
- Carchemish, 284.
excavations at, 128.
- Cartagena, mines at, 314.
- Carter, Howard, 4.
- Cassiterides, 103.
- Cemeteries of Abydos, The: Work of the Season 1925-26, H. FRANKFORT, 235-245.
- Chalcedon, Council of, 232.
- Chellean implements, 265.
- Chinnereth, 285.
- Chronological Pitfalls, J. G. MILNE, 20-21.
- Chronological Problems of the Twentieth Dynasty, The, T. ERIC PEET, 52-73.
- Claudius, 18, 21.
- Cleitarchus, 253.
- Clemens, 213.
- Clement, 234.
of Alexandria, 27.
- Clysmia, Suez and, J. J. HESS, 277-279.
- Coeli-Syria under Ptolemy II, 249.
- COLLART, PAUL, *Les Papyrus Bouriant* (reviewed), 186.
- Constantine and Egypt, 232.
- Constantinople, provisioning of, 38.
- Coptic Conjunctive Tense, Notes on the, ALAN H. GARDINER, 86-96.
- Coptic language, origin of, 234.
- Cos, battle of, 13, 15.
- Crespius, Flavius, 123.
- Crete, relations with Egypt in Predynastic period, 275.
- CROWFOOT, J. W., Some Potsherds from Kassala, 112-116.
- Curman, Dr. S., 328.
- Cyprus under Ptolemy II, 249.
- Cyrene under Ptolemy II, 249.
- Cyril, 213.
- Cyzicus, Eudoxos of, 13.
- D**
- Dacia, 17, 21.
- Dalion, 253.
- Danab at-Timsâh, 277.
- Daqlianûs = Diocletianus?, 112, 116.
- Darwin, Charles, 215 ff.
- DAVIES, NINA DE GARIS and ALAN H. GARDINER, *The Tomb of Huy, Viceroy of Nubia in the reign of Tutankhamûn* (reviewed), 187-8.
- Davies, N. de Garis, 82, 182.
- DAWSON, WARREN R., Note on an Ancient Egyptian Figure, 126-127.
review by, 194.
- Decius, 16, 21.
- Dedtu, 238.
- Delos, 24.
- Delta, Ptolemaic temple in, 248.
- Demeter, 215.
- Demetrius of Phaleron, 253.
- Demetrous, Aurelia, 119.
- Den, ivory label of, 110.
- Dendera, temple at, 230.
- Dêr el-Bahri, excavation at, 128.
statue of Hatshepsut at, 2.
temple of Nebhepetre^c Mentuhetep at, 109.
- Dêr Rifah, New Kingdom tomb at, 220.
- Dhutihetep, 111.
- Dhutmose, 65, 66, 72.
- DICKER, M. E., Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7):
7. Palaeography and Diplomatic, 156.
- Didymus, 80.
- Diocletian, 16, 115.
Egypt under, 231.
lease of time of, 120.
- Diodorus, 22, 220, 251, 291.
- Diodorus Siculus, tin mentioned by, 98, 101, 102, 103.
- Dionysias, 321.
- Dionysius, 251.
- Dionysius, Aurelius, 120.
- Dionysius (Heraclianus), 119.
- Dionysus, 213.
- Diophanes, 289, 293.
- Dioscorides, 27.
- Diospolis pottery, 267.
- Dorotheus, 33.
- Dorotheus, Aurelius, 123.
- DRIVER, G. R., with HUGO GRESSMANN, H. W. ROBINSON, T. H. ROBINSON and A. M. BLACKMAN, *The Psalmists* (reviewed), 197.
- Dunham, Dows, 126.
- E**
- Edfû, temple at, 214, 230.
- EDGAR, C. C., 130.
Three Ptolemaic Papyri, 288-293.
review by, 330.
- Egypt invaded by Arabs and Persians, 233.
- Egypt and Black Sea, commercial relations, 14.
- Egypt and Bosphorus, commercial relations, 14.
- Egypt under Constantine, 232.

- Egypt, coined metal adopted by, 227.
 use of bronze in, 106 ff.
 use of tin in, 97.
- Egyptian Fish-Names used by Greek Writers, On, D'ARCY WENTWORTH THOMPSON, 22-33.
- Egyptian Nationalism under Greek and Roman Rule. J. GRAFTON MILNE, 226-234.
- Egyptian Split Infinitive and the Origin of the Coptic Conjunctive Tense, ALAN H. GARDINER, 86-96.
- Egyptian envoys to Byblos, 65.
 objects in South Russia, 14
- El-Amarnah, 5, 8.
- Elba, tin ore in, 99.
- El-Bersheh, tomb of Dhutihetep at, 111.
- Elephantine, elephant standards belong to, 264.
 decree (Ramesses III), 95.
- El-Hawâtah, 7.
- El-Kâb, Renni mayor of, 211, 212.
 tomb of Bebi at, 213.
 tomb of Pahari at, 212, 221.
- El-Khozam pottery, 267.
- El-Masâdî, 278.
- Emery, W. B., 47, 182, 325.
 reviews by, 202.
- Epaenetus, 31.
- Ephesus, excavations at, 128.
- Epimachus, 118.
- Epiphanius, 33.
- Eratosthenes, 253.
- Ergamenes of Meroë, 254.
- Eritrea, 114.
- ERMAN, ADOLF, *Literature of the Ancient Egyptians*. Translated by A. M. BLACKMAN (reviewed), 331.
- Erment, excavations at, 325.
- Esneh, 26.
- Essays in Aegean Archaeology, 182.
- Ethiopia, Graeco-Roman pottery in, 114.
- Etruria, tin found in, 99.
- Eucherius, 123.
- Euclid, 253.
- Eudoxos of Cyzicus, 13.
- Eukles, 292-293.
- Eumelos, 13.
- Eusebius, 52.
- Eustathius, 78.
- Euthydemus, 25.
- EVANS, SIR ARTHUR, Palace of Minos at Knossos, 326.
 essays presented to, 182.
- Ezekiel, tin mentioned in, 98.
- F**
- Faras pottery, 115.
- Farmakowsky, Professor B., 14.
- FAULKNER, R. O., reviews by, 192, 193.
- Fayyûm, 13.
- Five Leases in the Princeton Collection, H. B. VAN HOESSEN and A. C. JOHNSON, 118-125.
- Flavius, 121, 123.
- Fostât, 277.
- France, tin ore from, 101, 102.
- Frankfort, H., 181, 325.
 lecture by, 180.
 review by, 192.
 The Cemeteries of Abydos: Work of the Season 1925-26, 235-245.
- Frazer, Sir James, 221.
- G**
- Galba, 21.
- Galen, 27.
- Gallienus, 16, 19.
- Gallus, 16, 17, 21.
- GARDINER, ALAN H., 56, 180, 181.
 paper by, 326.
 An Egyptian Split Infinitive and The Origin of the Coptic Conjunctive Tense, 86-96.
 The Graffito from the Tomb of Pere, 10-11.
 with DAVIES, NINA DE GARIS, *The Tomb of Huy, Viceroy of Nubia in the reign of Tutankhamûn* (reviewed), 187-8.
- GARLAND, H. and C. O. BANNISTER, *Ancient Egyptian Metallurgy* (reviewed), 190.
- GARSTANG, JOHN, An Ivory Sphinx from Abydos, 46-7.
- Gaza, 287.
- Gebel el-Hamâm, 307.
- Gemellae, inscription from, 19.
- Germanos, 35, 41.
- Gerzah, 264.
- Gezer, sundial of Menephtes at, 286.
- Gilufepa, 285.
- GLANVILLE, S. R. K., 261, 325.
 reviews by, 188-191, 331.
 lecture by, 180.
 The Letters of Aahmose of Peniati, with additional note, 294-312.
- Glaucias, Ptolemy son of, 229.
- Graeco-Roman pottery in Ethiopia, 114.
- Graffito from the Tomb of Pere, The, ALAN H. GARDINER, 10-11.
- Greece, silver mines of, 313.
- Greek Sightseers in Egypt, M. ROSTOVITZEFF, 13-15.
- GRESSMANN, HUGO, with H. W. ROBINSON, T. H. ROBINSON, G. R. DRIVER and A. M. BLACKMAN, *The Psalmists* (reviewed), 197.
- Griffith, F. Ll., 181.
 reviews by, 206, 332-3.
Oxford Excavations in Nubia (reviewed), 194.
- GRÖBER, KARL, *Kinderspielzeug aus alter Zeit* (reviewed), 206.
- Gurob, 289, 309.
- H**
- Hadrian and Antinous, 7.
- Hall, H. R., 184, 261.
 lecture by, 180.
 papers by, 326.
 reviews by, 199, 200, 201, 203, 206.
 David George Hogarth: Obituary Notice, 128-130.
 Keftiu, 182.
 A predynastic Egyptian Double-axe, 182.
 Objects of Tutankhamûn in the British Museum, 74-77.
 A Painted Terracotta Head in the British Museum, 209-210.
 The Statues of Sennemut and Menkheperre'seb in the British Museum, 1-2.
- Hallenga, 112.
- Hamitic-African culture, 269, 271 ff.
- Hamitic colonization of Egypt, 265.
- Hammerton, J. A., 183.
- Hamilgalbat = Mitanni, 283, 284.
- Hannibal, 314.
- Haragah, 264.

- Haremhab, portrait statue of Tutankhamun
 usurped by, 75.
 decree of, 86, 87, 90, 93, 94, 95.
 Harpokrates, 227, 229.
 Hatshepsut, 4, 184, 295, 307.
 statues of, 2, 184.
 Hattusilis II, 285.
 Hayter, A. G. K., obituary notice of, 184, 323-4.
 Hazor, 286, 287.
 Heart Scarab of the Mnevis Bull, A, W. SPIEGEL-
 BERG, 12.
 Heathcote, Dr., 180.
 Hector, 79.
 Hediry, 239.
 Hekekyan Bey, 8.
 Hekekeheh, 83, 84, 85.
 Hekreshu, 83, 84, 85.
 Heliopolis, 181, 307.
 Mnevis Sanctuary at, 12.
 Heniochos, 293.
 Heracleion, 120.
 Heraclianus, Dionysius, 119.
 Herakleopolitans and Thebans, civil wars between,
 211.
 Herculanum, figure of pig from, 216.
 Herihor, 52, 64, 65, 72.
 Herkhuf, 235, 236, 237.
 Hermias, 119.
 Hermonthis, 295, 296, 297, 325.
 Hermoupolis, 39, 125.
 Hero of Alexandria, 27.
 Herodotos, 22, 25, 26, 212, 213, 226, 313.
 tin mentioned by, 98, 102.
 Herondas, 252.
 Heroopolis, 251.
 Herophilus, 253.
 Herreshy, 239.
 Hess, J. J., Suez and Clysmā, 277-279.
 Hesychius, 33.
 Hetepsekhemui, Set the tutelary deity of, 220.
 Hetept, 241.
Heutige Stand der römischen Rechtswissenschaft,
 Der, Professor L. WENGER (reviewed), 186-7.
 Hipparchus, 253.
 VAN HOESEN, H. B. and A. C. JOHNSON, Five
 Leases in the Princeton Collection, 118-125.
 HOGARTH, DAVID GEORGE, Obituary of, 128-130, 326.
 Homer, 22.
 tin mentioned by, 97.
 Horapollon, 29, 33.
 Horemheb, 3.
 Tuthmosis, official of, 111.
 Hori, 60, 66, 303.
 Hori, popular name in Twentieth Dynasty, 69.
 Hori. stela of, at Abydos, 65.
 Horisheri, 64.
 Horkhebt, 244.
 Hornefer, Kenna son of, 49
 HUNT, A. S., reviews by, 185, 186.
 Huy, 91.
 Hyksos, King, ivory Sphinx of, 46.
 Hypatia, 232
 Hypselite nome, 220.
- I**
- Ibn Dukmak, 278.
 Ideky, 235.
- Iernutef son of Ka..., 49.
Iliad, XII, 128-263, The New Ptolemaic Papyrus
 containing parts of, G. M. BOLLING, 78-81.
 India, Ptolemy II sends embassy to, 251.
 tin shipped to, 98.
 Inena, tomb of, at Thebes, 219.
 Inpuam, 235.
 Iotefsonb, 10, 11.
 Ipip, 68.
 Ipui, Khons son of, 49.
 Irthorru, 245.
 Ir-t-nefer-t, 243.
 Iryn, 284.
 Isaiah, 215.
 tin mentioned in, 98.
 Isis, Queen, 52, 55, 58.
 Itfamun = Itamun, 60.
 Ivory Sphinx from Abydos, AN, JOHN GARSTANG,
 46-47.
 Iye, 76.
- J**
- Jaffa, alabaster vessel from, 47.
 Jeremiah, 33.
 Jericho, relations with Egyptian finds, 275.
 Jerusalem, destruction of, 231.
 Jevons, Dr., 214.
 Jews at Alexandria, attack on, 231.
 JOHNSON, A. C. and H. B. VAN HOESEN, Five
 Leases in the Princeton Collection, 118-125.
 Jones, Harold, 76.
 Justinian, 232.
 Justus, Aurelius, 120.
- K**
- Ka..., Iernutef son of, 49.
 Kadesh, 284.
 Kadet, 51.
 Kafr Ammar, 12.
 Kallias, 293.
 Karnaim, 286.
 Karnak, reliefs at, 66, 72.
 statues of Sennemut at, 2.
 temple of Khonsu at, 64.
 text of Amenophis II from, 284.
 Kasankh, 51.
 Kashuti, 70.
 Kassala, Some Potsherds from, J. W. CROWFOOT,
 112-116.
 Kau, 181, 264.
 Kau el-Kebir, prehistoric vase from, 261, 267.
 Kedakhtef son of Amenkhaou, 49.
 Keftiu, H. R. HALL, 182.
 Kenembaton, 42.
 Kenna son of Hornefer, 49.
 Amenhotpe, son of, 49.
 KENYON, F. G., review by, 329-30.
 Kerkuk, 283, 284.
 Kerma, use of blacklead by potters in Twelfth
 Dynasty at, 114.
 Keseru, 242.
 Kha, tomb of, 181.
 Khaemhezet, 64.
 Khaemwese, 58-9, 64-6, 70, 72.
 Khakheperre, 239.
 Khasekhemui, Set the tutelary deity of, 220.

- Khentikhetibotpe, 240.
 Khepermarē, 49, 50, 51.
 Kheta decree, 93.
 Khian, 46.
 Khons, son of Ipuī, 49.
 Khonsu, 1.
 Khorasan, tin ore at, 100.
 Kleon, 288.
 Kôm Ombo, 266, 307.
 Konosso, graffiti at, 84, 85.
 Kottaras, 118.
 KRAEMER, C. J. and W. A. WESTERMANN, *Greek Papyri in the Library of Cornell University* (reviewed), 185.
 Krokodilopolis, 288, 289, 293.
 Kurbaba mountains, tin ore from, 100.
 Kurûn Ḥattîn, 281.
- L**
- Lagrelius, A., 328.
 Lagus, Ptolemy, son of, 226.
 Lâhûn, 302, 309.
 Lapiths, 80.
 Latin Petition of Abinnaeus, A. (Papyrus B.M. 447), SEYMOUR DE RICCI, 320-322.
 Latopolis, 26.
 Laurion, silver mines of, 313.
 Lawis, 286.
 Lebanon, 109.
 Leonteus, 80.
 Letters of Aahmōse of Peniati, The, with Additional Note, S. R. K. GLANVILLE, 294-312.
 Libyan dog, 267.
 feather, 267.
 phallus-sheath, 267.
 Libyans in Egypt in Twentieth Dynasty, 68.
 and Western Delta, 270.
 Set the god of the, 220.
 Licinii, 320.
 Linnaeus, 26.
 Longinus, 118.
 LUCAS, A., *Ancient Egyptian Materials* (reviewed), 188.
 Notes on the Early History of Tin and Bronze, 97-108.
 Silver in Ancient Times, 313-319.
 Lucian, 22.
 Lugn, Pehr, 328.
 Lusitanians, 103.
 Lycian barracks of Oxyrrhynchus, 119.
 Lycopolis, temple of Ophois at, 74.
 Lysimachus of Thrace, 250.
 Lythgoe, A. M., 327.
- M**
- Maanehktef, Userhatmer, son of, 49.
 Mace, A. C., 184, 327.
 Macedon, Philadelphos' struggle with, 15.
 Macedonian calendar, 289.
 MCKENZIE, R., *Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7):*
 8. Lexicography and Grammar, 156.
 Macrianus, 18.
 Maeotians, 14.
 Magas of Cyrene, 249, 250.
 Magdola, 289.
 Maha, 243.
 Mahasnah, ivory figure from, 269.
 pottery from, 267.
 Maetho, 254.
 Marsa Matrûh, 270.
 Martial, 25.
 MATTINGLY, H., *Note on the Chronology of the Roman Emperors in the Second Half of the Third Century*, 19.
 Mattiwaza, 283.
 Medinat Habu, 182
 list of princes at, 53, 58, 59, 61.
 palace of Amenophis III at, 299.
 temple of Ramesses III at, 213.
 Megiddo, 284, 287.
 Memphis, building of Semenkharē at, 9.
 property given by Amenophis III to temple of Ptah at, 211.
 statue of Ramesses II at, 8.
 temple of Sarapis at, 229.
 Menephthes, sundial of, 286.
 Menes, date of, 275.
 Menkheperresenb in the British Museum, The Statues of Sennemut and, H. R. HALL, 1-2.
 funerary statue of, 76.
 Menmarē, see Ramesses XI.
 Menmarēnakht, 66, 70.
 Menthuwaser, 211.
 Mentuherkhepeshef, 54.
 Mentuhotep, 240, 297, 299.
 Meroë, Ergamēnos king of, 254.
 Meroitic pottery, 115.
 Meryrē, 5.
 Meryrē II, cartouches in tomb of, 5.
 Merytaten, 5, 7, 117.
 Mes, inscription of, 93.
 Meshwesh in Egypt in Twentieth Dynasty, 68.
 Mesopotamia, its relations with Egypt in Pre-dynastic period, 275.
 Methen, 211.
 Metternich stela, 214.
 Middle Kingdom Mayor of Byblos, A, PERCY E. NEWBERRY, 109-111.
 Miletus, siege of, by Antiochus, 250.
 MILNE, H. J. M., 78.
 Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7). 1. Literary Texts, 131-3.
 MILNE, J. G., with BAYNES, N. A. *Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7):*
 4. Political History, Biography, Administration, Topography, Chronology, 144-7.
 5. Social Life, Education, Art, Economic History, Numismatics and Metrology, 147-9.
 Chronological Pitfalls, 20-21.
 Egyptian Nationalism under Greek and Roman Rule, 226-234.
 Mini, 304, 305, 306.
 Minoan Crete, 182.
 Egyptian parallel to sacral knot of, 1.
 sacral knot of, 76.
 Miscellanea, PERCY E. NEWBERRY, 109-111.
 Mitanni, 282 ff.
 Mnevis Bull, A Heart Scarab of the, W. SPIEGELBERG, 12.
 Moeris, Lake, 78.
 drainage of, 251.
 fish from, 22.

- Mohassib, Mohammed Bey, 184.
 Mond, Robert, 182, 325.
 Mousterian implements, 265.
 Mury, Inpuam surnamed, 235.
 Mutemwia, 84.
 portrait of, with Amenophis III, 82.

N

- Naba, 277.
 Nabataeans, 251.
 Nahr el-Kelb, 287.
 Nakadah, 264.
 Nakadah pottery, 267.
 Nakht, 301.
 Nash, W. L., 75.
 Naukratis, 247.
 excavations at, 128, 130.
 Nauri, inscription of, 94.
 Nebamon, tomb of, at Thebes, 219.
 Nebhepetrē Mentuhetep, Temple of, at Dēr el-Bahrī, 109.
 Nebmarēnakht, 66, 70, 72.
 Nebpehtirē Acabau, 242.
 Nebthetiit, 244.
 Neferhotpe, tomb of, 89.
 Neferkerē, 49, 50, 51.
 Neferkheprurē, 7, 10.
 Nefernefruaten, 3, 4, 5, 10.
 Neferrēemperamūn, 66, 70.
 Nefertiti, 7, 117.
 Neferurē in arms of Senmut, statue of, 1.
 Nekhemmut, 68.
 Nero, coins of, 21.
 Nesamun, 66, 70.
 popularity of name in Twentieth Dynasty, 69.
 Neshememhet, 235.
 New Ptolemaic Papyrus containing parts of *Iliad*, XII, 128-263, The, G. M. BOLLING, 78-81.
 NEWBERRY, PERCY E., 184.
 Akhenaten's Eldest Son-in-law, Ankhkheprurē, 3-9.
 Miscellanea, 109-111.
 Note on the Sculptured Slab no. 15,000 in the Berlin Museum, 117.
 The Pig and the Cult-animal of Set, 211-225.
 The Sons of Tuthmosis IV, 82-85.
 Newton Memorial volume, 180.
 Nicanor, 118.
 Nilus, 123.
 Nock, A. D. Bibliography: Graeco-Roman Egypt. A. Papyri. 2 Religion, Magic, Astrology, 134-140.
 Nouna, Aurelia, 123.
 Nonnus of Panopolis, 234.
 Note on an Ancient Egyptian Figure, WARREN R. DAWSON, 126-127.
 Note on the Chronology of the Roman Emperors of the Second Half of the Third Century, H. MATTINGLY, 19.
 Note on the Sculptured Slab no. 15,000 in the Berlin Museum, PERCY E. NEWBERRY, 117.
 Notes on the Early History of Tin and Bronze, A. LUCAS, 97-108.
 Notes and News, 180-4, 325-8.
 Notices of Recent Publications, 185-207, 329-333.
 Nubia, 274.
 Nubian parallels to Kassala pottery, 114.

- Nubian pottery, 47.
 Nubians in Egypt in Twentieth Dynasty, 68.
 Numbers, tin mentioned in, 98.
 Numidia, Gemellae in, 19.

O

- Obituary, A. G. K. Hayter, 323-4.
 David George Hogarth, H. R. HALL, 128-130.
 Ernesto Schiaparelli, 181.
 Objects of Tutankhamūn in the British Museum, H. R. HALL, 74-77.
 Observations on the Chronology of the Roman Emperors in the Second Half of the Third Century, ARTHUR STEIN, 16-18.
 Oestrymnides of Avienus, 103.
 O'LEARY, DE LACY, *Arabia before Muhammad* (reviewed), 331.
 Oppian, 22, 28, 29, 32.
 Ormenos, 80.
 O'Rorke, E. B., 325.
 Otho, 21.
 Oxyrhynchus Papyri XVII, 181.
 Oxyrhynchus, 119, 121.

P

- Paerisades, 13, 15.
 Pafherner, 245.
 Pahel, 286.
 Paheri at El-Kāb, tomb of, 212, 221.
 Painhasy, 67, 68.
 Painted Terracotta Head in the British Museum, A. H. R. HALL, 209-210.
 Pakharu, popular name in Twentieth Dynasty, 69.
 Palermo stone, annals of Sahurē on, 214.
 Palestine, its relations with Egypt in Predynastic period, 275.
 under Ptolemy II, 248.
 wavy-handled pots of Egypt and, 273.
 Palmyra, 21, 115.
 Panehsi, 65.
 Panit, 39.
 Panopolis, Nonnus of, 234.
 Pantaenus, 234.
 Pantikapæum, 14.
Papyrus Bouriant, Les, PAUL COLLART (reviewed), 186.
 Pathesemhor, 244.
 PATON, DAVID, *Animals of Ancient Egypt* (reviewed), 202.
 Paulus, Aurelius, 121, 122.
 Pawah, 6, 10, 11.
 PEET, T. ERIC, The Chronological Problems of the Twentieth Dynasty, 52-73.
 The Egyptian Writing Board B.M. 5467, bearing Keftu names, 182.
 A. G. K. Hayter, obituary notice, 323-4.
 with GIUSEPPE BOTTI, *I papiri ieratici del Museo di Torino* (reviewed), 206.
 reviews by, 187, 196, 197.
 Peheti, 68.
 Peloponnesian war, 14.
 Perneramūn, 66, 70.
 Penamous, 120.
 Peniati, 294, 296, 297.
 Pepinekht, 235.
 Perabsen, Set the tutelary deity of, 220.

- Pere, 4, 5.
The Graffito from the Tomb of, ALAN H. GARDNER, 10-11.
mortuary chapel of, 3.
Pergamum, 252.
Persia, mines of, 314.
origin of bronze in, 108.
tin ore in, 99.
Persian Empire, 226.
Persian invasion of Egypt, 233.
Pesiūr, 66, 70.
Petrie papyri, 288.
Pewerō, 64-66, 70.
Pharos lighthouse, 247.
Philadelphia, 289-91.
Philadelphos, 13.
Philae, temple at, 230, 248.
Philetas of Cos, 246.
Philip, 16.
Philotimus, 25.
Phoenicia under Ptolemy II, 248.
Phoenicians and tin trade, 102.
Photius, 78.
Pig and the Cult-animal of Set, The, P. E. NEWBERRY, 211-225.
Plato, 27.
Pliny, 22, 25, 314, 315.
tin mentioned by, 98, 101, 102.
Plutarch, 26, 213.
Pnehesi, viceroy of Nubia, 66.
Polybius, 229, 314.
Polydamas, 79.
Polypoites, 80.
Portugal, tin ore from, 101.
Posidonius, 3, 314.
tin mentioned by, 98, 101.
Potsherds from Kassala, Some, J. W. CROWFOOT, 112-116.
Praherwenemef, 54, 57, 58.
Predynastic Egypt, pig known in, 211.
Prehistoric Vases in the British Museum and Remarks on Egyptian Prehistory, Some, ALEXANDER SCHARFF, 261-276.
Probus, subjection of Egypt under, 231.
Procopius, 115.
Psoi, 227.
Ptahu, 303, 304, 305, 310.
Ptolemaios, 291.
= Botlus, 116.
Ptolemais, 227, 247.
Ptolemy I, 226-8.
Ptolemy II, W. W. TARN, 246-260.
Ptolemy II, 13.
monopoly system originated by, 257.
Ptolemy IV defeats Syrians at Raphia, 228.
Pylon, 80.
Pytheas, 104.
- Q**
- Qara Dagh, tin ore from, 100.
- R**
- Ramesses II, 59, 65, 72, 91.
statue at Memphis, 8.
Ramesses III Usimarēc-Miamūn, 53 ff.
temple of, at Medīnat Habu, 213.
Ramesses IV, 53 ff.
Ramesses V Usimarēc-Sekheperenrēc, 53 ff.
Ramesses VI Nebmarēc-Miamūn, Ramesses-Amenherkhepeshef-Neterhekon, 54 ff.
Isis, daughter of, 52.
Ramesses VII Usimarēc-Miamūn-Setpenrēc, Ramesses-Itamūn-Neterhekon, 54 ff.
Ramesses VIII Setherkhepeshef Usimarēc-Akhenamūn, 53 ff.
Ramesses IX, 48, 53 ff, 61 ff.
Ramesses X, Khepermarēc-Setpenrēc, Ramesses-Amenherkhepeshef, 54 ff.
Ramesses XI, Menmarēc-Setpenptah, Ramesses-Khaemwēse-Miamūn-Neterhekon, 50, 54, 60 ff.
Ramose, tomb of, 3, 182.
Raphia, defeat of Syrians at, 228, 259.
Rebecca, 117.
Renni, mayor of El-Kāb, 211, 212.
Rēcpu, 239.
Rhaetia, 19.
Rhodes, 14.
DE RICCI, SEYMOUR, A Latin Petition of Abinnaeus (Papyrus B.M. 447), 320-322.
ROBINSON, T. H., with HUGO GRESSMANN, H. W. ROBINSON, G. R. DRIVER and A. M. BLACKMAN, *The Psalmists* (reviewed), 197.
Roman conquest of Egypt, 230.
Roman period, terracotta head of supposed, 209.
Rondeletius, 22.
Rosetta stone, 228.
ROSTOVITZEFF, M., Greek Sightseers in Egypt, 13-15.
History of the Ancient World. Vol. I. The Orient and Greece (reviewed), 196.
ROUILLARD, GERMAINE, *L'Administration civile de l'Égypte byzantine* (reviewed), 333.
ROWE, ALAN and W. F. ALBRIGHT, A Royal Stele of the New Empire from Galilee, 281-287.
Royal Stele of the New Empire from Galilee, A, W. F. ALBRIGHT and ALAN ROWE, 281-287.
Russia, 13.
- S**
- Sahurēc, annals of, 214.
mortuary temple of, 220.
Saite times, faience sows as amulets in, 211.
Sakje-Geuzi, pottery from, 47.
SANDERS, HENRY A. and CARL SCHMIDT, *The Minor Prophets in the Freer Collection and the Berlin Fragment of Genesis* (reviewed), 329-330.
Šanḥar, 283.
Sarapion, 41, 119.
Sarapis, 227.
Sarmatians, 14.
Satorne, 120.
Sattuara, 285.
Sauromatians, 14.
Sauššatar, 283, 284.
Saxony, tin ore in, 99.
SCHARFF, ALEXANDER, Some Prehistoric Vases in the British Museum and Remarks on Egyptian Prehistory, 261-276.
SCHIAPARELLI, ERNESTO, obituary of, 181.
Relazione sui lavori della Missione Archeologica Italiana in Egitto (reviewed), 203.
SCHNEBEL, M., An Agricultural Ledger in P. Bad. 95, 34-45.
Scythians, 13, 14.
Se-aa-ka-ra-zeser-kheperu, 5.

- Sebekemheb, 238.
 Seleucid Hellenization of Syria, 230.
 Semenkharêç, 5, 6, 7, 117.
 with Akhenaten, 8.
 Semenkharêç, building of, at Memphis, 9.
 Semites, 215.
 Semitic portrait of late Middle Kingdom, 46.
 Senebtet (Senebtify), 242.
 Senebu, 239.
 Senmery, 239.
 Sennut, *see also* Sennemut, 308.
 Senna, 218.
 Sennemut and Menkheperreçsenb in the British Museum, The Statues of, H. R. HALL, 1-2.
 Septimius Severus, lease of reign of, 118.
 Serambos, 273, 289-91.
 Serenus, Aurelius, 119.
 Sesostri III, stele of time of, 240.
 Sesostri, son of Hetept, 241.
 Setekhmoze, 51.
 Sethe, Kurt, 183.
 Seti I, 65, 67.
 at Abydos, excavation of temple of, 30, 180.
 renewal of burial of, 72.
 the Cenotaph of, 180.
 Setnakht, 52, 57.
 Shalmaneser I, 285.
 Shashotep (Shuteb), 220.
 Shaṭṭer-Rigâl, 295.
 Shemsukheper, 85.
 Shenay, 235.
 Shepenhor, 245.
 Shishak, 287.
 Shorter, A. W., 325.
 Shuteb (Shashotep), 220.
 Silsilah, 295, 296, 308.
 Silver in Ancient Times, A. LUCAS, 313-319.
 Sinai, civilization from, to Egypt, 274.
 Sinous, tin ore from, 100.
 Siphanos, 313.
 Sitkherti, 239.
 Sitsneferu, 239.
 Smenkherêç, 77.
 Smith, Otto, 328.
 SMITH, SIDNEY, *Early History of Assyria* (notice), 326.
 review by, 196.
 Solon, 313.
 Somaliland, tin shipped to, 98.
 Sons of Tuthmosis IV, The, PERCY E. NEWBERRY, 82-85.
 Sostratos, 247, 291-3.
 Spain, silver mines of, 313.
 tin ore from, 101.
 Spartocids, 13.
 SPIEGELBERG, W., *The Credibility of Herodotus' Account of Egypt* (reviewed), 192.
 A Heart Scarab of the Muevis Bull, 12.
 Statues of Sennemut and Menkheperreçsenb in the British Museum, The, H. R. HALL, 1-2.
 STEIN, ARTHUR, Observations on the Chronology of the Roman Emperors in the Second Half of the Third Century, 16-18.
 STEINDORFF, GEORG, *Die Kunst der Ägypter* (reviewed), 201.
 Strabo, 22, 26, 30, 100, 313.
 tin mentioned by, 98, 101, 102.
 Straton, 247.
 Subbiluhuma, 283-5.
 Sudan, pottery of, 113.
 Suez and Clysma, J. J. HESS, 277-279.
 Suidas, 260.
 Šulb (Soleb), lions of Amenophis III at, 76, 77.
 Susa, relations with Egyptian finds, 275.
 Suttarna, 283, 285.
 Suwais, 277.
 SUYS, ÉMILE, *Vie de Petosiris, grand-prêtre de Thot* (reviewed), 199.
 Syagrius, 123, 233.
 Syria, Hellenization of, 230, 234.
 its relations with Egypt in Predynastic period, 275.
 Philadelphos' struggle with, 15.
 pottery from, 47.
 revolts against Egypt, 284.
 tin ore in, 99.
 Syrian defeat at Raphia, 228.
 portrait of late Middle Kingdom, 46.
 Syro-Keftians, 182.
 Syrus, 118.
- T**
- Tâbghah, 285.
 Tabriz, tin ore from, 100.
 Tacitus, 20.
 Tadiogas, 119.
 Tadoukhipa, 4.
 Tai, 306, 309.
 Tait, J. G., 181.
 Taman peninsula, 13.
 Tarkhân, 265.
 TARN, W. W., Ptolemy II, 246-260.
 Taurus, tin from, 100.
 Taurtemheb, 60.
 Tehenu, 282.
 Tell el-'Amarnah, The Mural Paintings of, 180.
 Tell el-'Oreimeh, 281, 285.
 Tell-esh-Shihâb, 286.
 Tell Nebi Mendu (Kadesh), 286.
 Telmessus, 258.
 Terekhy, 245.
 Tetisheri, 304, 305, 306.
 Thalmoon, 39, 42.
 Thay, 10.
 Thebans and Herakleopolitans, civil wars between, 211.
 Thebes, 3, 26.
 excavations in valley of Tombs of Queens at, 57.
 Greek gymnasia in, 227.
 invasion of, by foreigners, 67.
 Pewerô prince of West of, 64.
 temple at, 230.
 temple of Amûn at, 296.
 tomb of Inena at, 219.
 tomb of Nebamon at, 219.
 Theocritus, 181, 246, 252, 253.
 Theodorus, 120.
 Theon, 291.
 Theonis, 118.
 Theta, 239.
 THOMPSON, CAMPBELL, Epic of Gilgamesh, 326.
 Thompson, Miss Caton, 271.
 THOMPSON, D'ARCY WENTWORTH, On Egyptian Fish-names used by Greek Writers, 22-33.

- Thothmes, 4; *see also* Tuthmosis.
 Thrace, 15.
 silver mines of, 313.
 Three Ptolemaic Papyri, C. C. EDGAR, 288-293.
 Thutinekht, 211.
 TILL, WALTER, *Coptica Consilio et impensis instituti Rusk-Oerstediani edita. IV. Die Achnimische Version der zwolf kleinen Propheten* (reviewed), 332.
 Tita, 86.
 Tiye, mother of Tutankhamūn, 77.
Tomb of Huy, Viceroy of Nubia in the reign of Tutankhamūn, THE NINA DE GARIS DAVIES and ALAN H. GARDINER (reviewed), 187-8.
 Trebonianus Gallus, 19.
 Trojans, 80.
 Tudhalias I, 284.
 Tunip, 284.
 Turah, 265, 272.
 Turin fragments of Twentieth Dynasty Diary, 48.
 king list, 275.
 Tuscany, tin ore in, 99.
 Tusratta, 283, 284.
 Tutankhamūn, 4, 7.
 Objects of, in the British Museum, H. R. HALL, 74-77.
 Tutankhaten, 117.
 Tuthmosid Head in British Museum, 184.
 Tuthmosis, major-domo of Horemheb, 111.
 Tuthmosis I, 295.
 Tuthmosis II, 295.
 Tuthmosis III, 228, 284, 285, 295, 307.
 Tuthmosis IV, 4, 84, 85.
 The Sons of, PERCY E. NEWBERRY, 82-85.
 terracotta head of period of, 209.
 tomb of time of, 3.
 Tyre, 252.
- U**
- Uga, 240.
 Unis, 127.
 Urnero, 91.
 Usirhatmer, son of Maanehktef, 49.
- V**
- Vaballathus, 21.
 Valerian, 16, 17, 19, 20.
 Vespasian, 21.
- Victor of Pois, 39.
 VIERECK, PAUL, *Philadelpheia* (reviewed), 330.
 Viminacium, 17, 18, 21.
 Vindusāra, 251.
 Vitellius, 21.
 Volusian, 16, 17.
- W**
- Wādī 'Abbād, 90.
 Wah, 11.
 Wanrēč, 10.
 Wažtrenput, 307, 309, 311.
 WEILL, R., *Études d'égyptologie: Bases, méthodes et résultats de la chronologie égyptienne* (reviewed), 193.
 Wenamūn, 64.
 Wenennefer, 66, 70, 72.
 WENGER, L., *Der heutige Stand der römischen Rechtswissenschaft* (reviewed), 186-7.
 Wenta, 239.
 WERBROUCK, M. and J. CAPART, *Thebes, The Glory of a Great Past* (reviewed), 184, 202.
 WESTERMANN, W. L. and C. J. KRAEMER, *Greek Papyri in the Library of Cornell University* (reviewed), 185.
 Who succeeded Ramesses IX-Neferkereč?, GIUSEPPE BOTTI, 48-51.
 Williams, Mrs. Grant, 12.
 Winlock, H. E., 184, 219.
 Woserkhepeshef, 64, 70.
- X**
- Xenocrates, 22, 27, 32.
 Xenophon, 313.
- Y**
- Yākūt, 277.
 Yenes, 65, 66, 70.
- Z**
- Zakro, flood in, 129.
 Zambesi, 218.
 Zenodorus, 80, 246, 253.
 Zenon, 255, 288, 289, 291-3.
 Zenon papyri, 13, 288.
 Zoser, Set the tutelary deity of, 220.
 DEZULUETA, F., *Bibliography: Graeco-Roman Egypt. A. Papyri (1926-7). 6. Law, 149-155.*
 review by, 186-7.



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